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ABSTRACT

This document contains informal assessment instruments for each of the access skills (those skills needed to access vocational education programs and be successful in the world of work) on Missouri's Vocational Readiness Skills Inventory for Special Needs Students. The document includes a checklist for documenting the informal assessments, which are intended to give teachers estimates of students' abilities so that appropriate individual programming goals can be set. Following a matrix that shows which access skills are required in which vocational programs, the introduction explains this document's relationship to other documents about Missouri vocational education. The next sextion explains the access skills chart that appeared earlier and the use of the Generic Assessment Access Skills checklist that follows. The next six sections contain assessment tasks designed to help teachers assess students' access skills in the five major areas of the inventory: math skills, physical demands and working environment, aptitudes, temperament, and vocational safety. The assessment tasks include paper and pencil measures, suggested activities and materials, and student and parent interviews and checklists. A five-item bibliography completes the document. (CML)

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because_____

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ACCESS SKILLS

Generic Informal Assessment Instruments and Checklist

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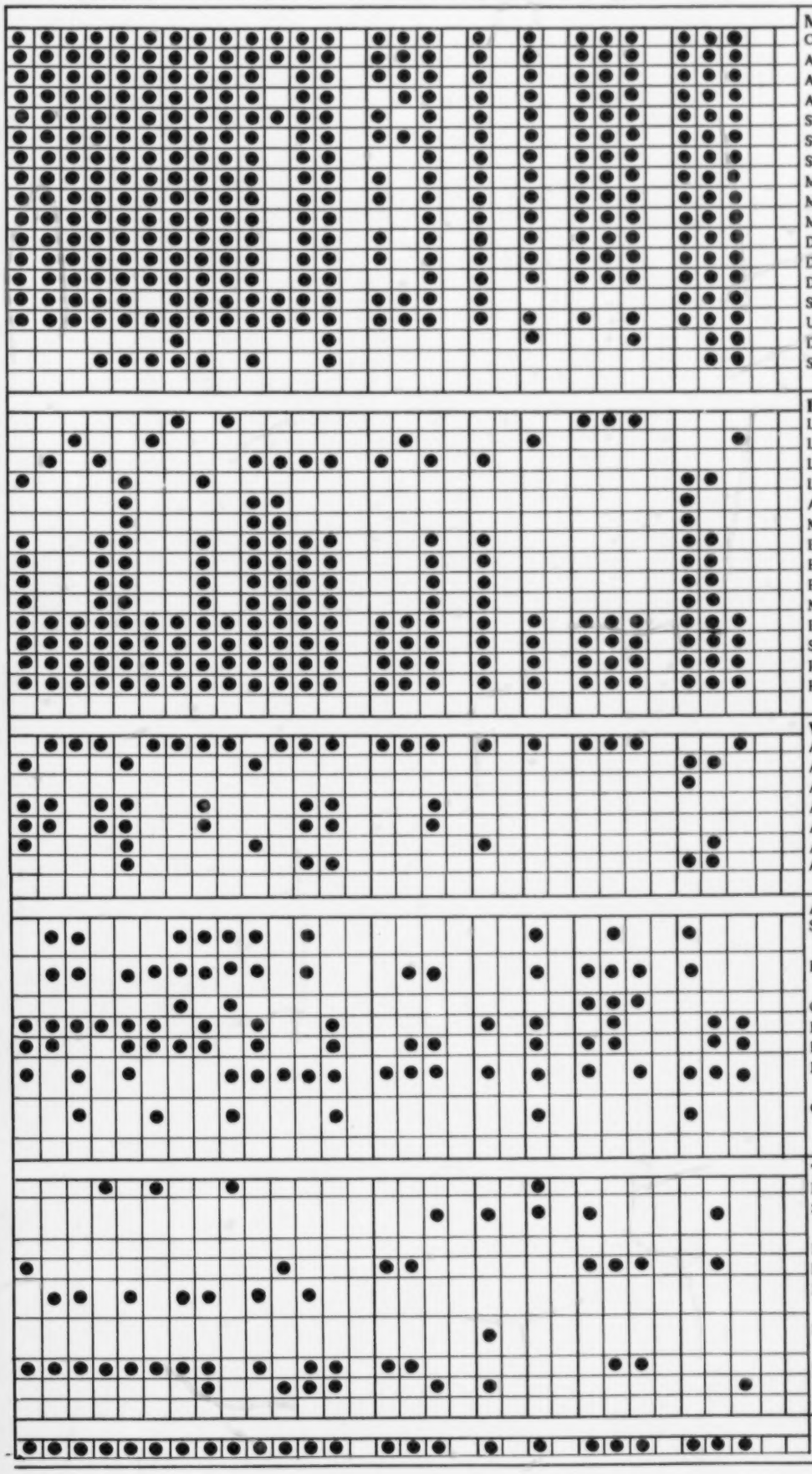
VOCATIONAL PROGRAM/ACCESS SKILLS CHART

VOCATIONAL PROGRAMS
AGRICULTURE
Agribusiness
Agricultural Management & Economics
Horticulture
BUSINESS & OFFICE
Bookkeeping/Accounting/Payroll
Data Entry Operator
Secretarial/Office Technology
MARKETING & COOPERATIVE EDUCATION
Fundamentals of Marketing
HEALTH OCCUPATIONS
Health Occupations
OCCUPATIONAL HOME ECONOMICS
Child Care Worker
Custom Sewing
Food Service Worker
TRADE & TECHNICAL
Auto Body Repair
Automobile Mechanics
Building Maintenance/Custodial
Carpentry
Commercial Art
Diesel Mechanics
Drafting
Electronics
Heating, Air Conditioning, & Refrigeration
Machinist
Offset Lithography/Printing Occupations
Small Engine Repair
Welding



MATH SKILL

- Count two-place numbers
- Add two-place numbers
- Add common fractions
- Add two-place decimals
- Subtract two-place numbers
- Subtract common fractions
- Subtract two-place decimals
- Multiply two-place numbers
- Multiply common fractions
- Multiply two-place decimals
- Divide two-place numbers
- Divide common fractions
- Divide two-place decimals
- Std. units of measurements (cup, pint, quart, inch, etc.)
- Use basic measuring instruments (ruler, scale, etc.)
- Discount, interest, and percentage
- Surface areas, values, weights, and measures

PHYSICAL DEMANDS

- Lift 10# max., occasionally lifting &/or carrying small articles
- Lift 20# max., frequent lifting &/or carrying objects weighing up to 10#
- Lift 50# max., frequent lifting &/or carrying objects weighing up to 25#
- Lift 100# max., frequent lifting &/or carrying objects weighing up to 50#
- Ascend/descend using feet & legs &/or hands and arms (climbing)
- Maintain body equilibrium (balance)
- Bend body downward and forward by bending spine at the waist (stooping)
- Bend legs at knees to come to rest on the knee or knees (kneeling)
- Bend body downward and forward by bending legs and spine (crouching)
- Move about on hands and knees or hands and feet (crawling)
- Extend hands and arms in any direction (reaching)
- Seize, hold, grasp, turn, or otherwise work with hands (handling)
- Pick, pinch, or otherwise work with fingers (fingering)
- Perceive size, shape, temp., or texture of objects using fingertips (feeling)

WORKING ENVIRONMENT

- Ability to work inside
- Ability to work both inside & outside
- Ability to work in wet and humid conditions
- Ability to work in extreme noise
- Ability to work with extreme vibrations
- Ability to work in hazardous situations, i.e., risk of bodily injury
- Ability to work in hazardous conditions, i.e., fumes odors, etc.

APTITUDES

- Spatial: Think visually of geometric forms; comprehend 2D respresentation of 3D objects; recognize relationship of object movement in space
- Form Perception: Perceive pertinent detail in objects; make visual comparisons/discriminations; & see slight differences
- Clerical Perception: Perceive pertinent detail in objects in written/tabular materials
- Motor Coordination: Coordinate eyes & hands or fingers rapidly and accurately
- Finger Dexterity: Move the fingers and manipulate small objects rapidly & accurately
- Manual Dexterity: Move the hands easily & skillfully; work with the hands in turning and placing motions
- Color Discrimination: Match or discriminate colors; identify particular color combinations; perceive contrasting color combinations

TEMPERAMENTS

- Influencing: Adaptability to influencing people in their opinions, attitudes, or judgments
- Sensory/Judgmental: Adaptability to making generalizations, evaluations, or decisions based on sensory or judgmental criteria
- Deal with People: Adaptability to deal with people beyond giving & receiving instructions
- Repetition: Adaptability to perform repetitive work according to set procedures
- Measurable/Verifiable: Adaptability to make generalizations or decisions based on measurable or verifiable criteria
- Stress: Adaptability to perform under stress when confronted with emergency &/or critical situations
- Precision: Adaptability to situations requiring the precise attainment of set limits
- Variety/Change: Adaptability to perform a variety of duties

VOCATIONAL

- Demonstrate knowledge of basic safety concepts

INTRODUCTION

Since 1981, Missouri educators have been utilizing the Entry Level Skills Criteria (ELSC) Manual to help prepare special needs students for entry into and successful completion of vocational training programs. With the passage of the Carl D. Perkins Vocational Education Act (P.L. 98-524), the Missouri mandate for instructional management systems and competency-based education, there was a need to revise the ELSC Manual. These revisions make the materials more compatible with the recent educational changes and better meet the needs of practitioners in the field. ACCESS SKILLS is the new name for the ELSC.

ACCESS SKILLS: Vocational Readiness Skills are defined as those skills which appear to be correlated to success in vocational education programs. If a student acquires as many of these skills as possible, the chances of success are higher for the chosen vocational program. The ACCESS SKILLS: Vocational Readiness Skills are negotiable skills; that is, students who are deficient in one or more areas may still enter vocational programs. Through assessment, these weak areas will be determined and vocational instructors and support personnel can then continue to work on the skills during vocational training. There has been a great deal of confusion with the original term "entry level skills". This terminology in vocational education usually refers to the skills needed to enter the world of work. ACCESS SKILLS better explains the objective: to identify, assess and teach skills needed to access vocational education programs and be successful in the world of work.

The ACCESS SKILLS are available in several manuals:

ACCESS SKILLS: Vocational Readiness Skills Inventory for Special Needs Students (Revised Entry Level Skills Inventory)

ACCESS SKILLS have been identified for vocational programs listed on the Vocational Administrative Management System (VAMS). Skill areas include math, physical demands/working environment, aptitudes, temperament and vocational. Sample occupational areas, Classification of Industrial Programs (CIP) codes, and Dictionary of Occupational Titles (DOT) codes have been included as well as employability and study skills. The ACCESS SKILLS lists will also be included on VAMS.

ACCESS SKILLS: Employability and Study Skills Assessment and Curriculum Guide

This guide includes informal assessment instruments to evaluate thirty-five employability and study skills with instructional activities included to teach each skill. This guide was designed for junior high students, but is applicable to any secondary student with needs in these areas.

ACCESS SKILLS: Generic Informal Assessment Instruments and Checklist

This manual contains informal assessment instruments for each of the ACCESS SKILLS: Vocational Readiness Inventory and a checklist for documenting the assessment.

ACCESS SKILLS: Vocational Readiness Series

ACCESS SKILLS: Vocational Readiness Skills for Agriculture

ACCESS SKILLS: Vocational Readiness Skills for Business & Office

ACCESS SKILLS: Vocational Readiness Skills for Marketing & Cooperative Education

ACCESS SKILLS: Vocational Readiness Skills for Health Occupations

ACCESS SKILLS: Vocational Readiness Skills for Occupational Home Economics

ACCESS SKILLS: Vocational Readiness Skills for Trade & Technical

The ACCESS SKILLS: Vocational Readiness Skills manuals were developed by occupational cluster areas and include the lists from the Vocational Readiness Skills Inventory for Special Needs Students as well as activity suggestions and instructional modules for teaching the different skills necessary for each program area.

MANUAL COMPONENTS

VOCATIONAL PROGRAM/ACCESS SKILLS CHART

This chart allows for easy reference to those ACCESS SKILLS needed for each vocational program area. Each ACCESS SKILL within the five areas (math, physical demands/working environment, aptitudes, temperament, and vocational) is listed across the top of the chart and the vocational program areas are listed down the left margin. Many of the same ACCESS SKILLS are needed across several vocational areas. If it is discovered, through informal assessment, that a student possesses these basic skills, it will be easier for the student to attain the competencies within the vocational program area.

GENERIC ASSESSMENT ACCESS SKILLS CHECKLIST

After assessing the skills with the measures and techniques in this manual or by other formal or informal assessments, the teacher can transfer the information obtained onto the Generic Assessment ACCESS SKILLS Checklist. On the checklist, each ACCESS SKILL is broken down into its component parts and the teacher will designate the student's performance or ability by circling the appropriate mastery code number.

3 = mastery
2 = requires supervision
1 = not mastered
N = no exposure

There is room on the checklist to fill in a mastery date as well as a re-entry code and date for mastery later in the year. After completion of the assessment, the areas of weakness can and should become goals in the IEP. Each manual in the ACCESS SKILLS: Vocational Readiness Series contains a similar summary checklist of the ACCESS SKILLS needed for the area the student wishes to pursue. This checklist, or the generic checklist, should be sent to the Area Vocational Technical School as part of the student's application. The codes (3, 2, 1, N) can be entered into the VIMS system if the vocational school desires to follow the student's mastery of skills.

A student does NOT have to show mastery of every skill on the ACCESS SKILLS list in order to enter a vocational program. These skills are negotiable and can continue to be practiced during vocational training. The deficient areas should help the planning team in developing realistic vocational goals and objectives and appropriate vocational training for the student. They also should help vocational personnel identify what skills still need to be practiced and/or what curriculum modifications need to be made to insure the success of the student.

Students with physical limitations may never achieve some of the ACCESS SKILLS, especially in regards to dexterity and other physical demands. This does not preclude them from entering and succeeding in an appropriate vocational area. In these cases, the teacher should make a comment regarding the compensatory techniques the student uses (i.e., strikes typewriter with pencil instead of fingers) and list any modifications that might be needed (i.e., typewriter template, longer time to complete assignments, etc.).

ASSESSMENT TASKS

This manual is sectioned by each of the five major areas of the ACCESS SKILLS: Vocational Readiness Inventory. Each section has assessment tasks designed to give teachers means and suggestions for assessing each of the ACCESS SKILLS. The assessment tasks include paper and pencil measures, suggested activities and materials, and student/parent interviews and checklists. It must be noted that these assessments are informal tasks and are not standardized norm-referenced instruments. The purpose of these assessment tasks is to give the teacher an estimate of the student's abilities within these skill areas so that appropriate individual programming goals can be made.

GENERIC ASSESSMENT
ACCESS SKILLS CHECKLIST

Student Name/ID _____ Sending School _____

Instructor _____ Date(s) Evaluated _____

Circle proper mastery code: 3 = MASTERY 2 = REQUIRES SUPERVISION
1 = NOT MASTERED N or blank = NO EXPOSURE

TASK DESCRIPTION	MASTERY CODE	MASTERY DATE	RETRY CODE/DATE
MATH SKILLS			
1. Count two-place numbers	3 2 1 N	_____	_____
2. Add two-place numbers	3 2 1 N	_____	_____
3. Subtract two-place numbers	3 2 1 N	_____	_____
4. Perform standard units of measurement, i.e., cup, pint, quart, inch, foot, yard, ounce, pound	3 2 1 N	_____	_____
5. Use basic measuring instruments, i.e., rulers, scales	3 2 1 N	_____	_____
6. Multiply two-place numbers	3 2 1 N	_____	_____
7. Divide two-place numbers	3 2 1 N	_____	_____
8. Add common fractions	3 2 1 N	_____	_____
9. Subtract common fractions	3 2 1 N	_____	_____
10. Multiply common fractions	3 2 1 N	_____	_____
11. Divide common fractions	3 2 1 N	_____	_____
12. Add two-place decimals	3 2 1 N	_____	_____
13. Subtract two-place decimals	3 2 1 N	_____	_____
14. Multiply two-place decimals	3 2 1 N	_____	_____
15. Divide two-place decimals	3 2 1 N	_____	_____
16. Add discount, interest and percentage	3 2 1 N	_____	_____
17. Subtract discount, interest and percentage	3 2 1 N	_____	_____
18. Multiply discount, interest and percentage	3 2 1 N	_____	_____
19. Divide discount, interest and percentage	3 2 1 N	_____	_____
20. Add surface areas, values, weights and measures	3 2 1 N	_____	_____
21. Subtract surface areas, values, weights and measures	3 2 1 N	_____	_____
22. Multiply surface areas, values, weights and measures	3 2 1 N	_____	_____
23. Divide surface areas, values, weights and measures	3 2 1 N	_____	_____

GENERIC ASSESSMENT
ACCESS SKILLS CHECKLIST

Student Name/ID _____ Sending School _____

Instructor _____ Date(s) Evaluated _____

Circle proper mastery code: 3 = MASTERY 2 = REQUIRES SUPERVISION
1 = NOT MASTERED N or blank = NO EXPOSURE

TASK DESCRIPTION	MASTERY CODE	MASTERY DATE	RETRY CODE/DATE
PHYSICAL DEMANDS			
24. Lift 10 lbs. maximum with occasional lifting and/or carrying of small articles, i.e., tools, ledgers (sedentary work)	3 2 1 N	_____	_____
25. Lift 20 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 10 lbs. (light work)	3 2 1 N	_____	_____
26. Lift 50 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 25 lbs. (Medium work)	3 2 1 N	_____	_____
27. Lift 100 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 50 lbs. (heavy work)	3 2 1 N	_____	_____
28. Ascend or descend, i.e., ladders, stairs, scaffolding, using the feet and legs and/or hands and arms (climbing)	3 2 1 N	_____	_____
29. Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)	3 2 1 N	_____	_____
30. Bend body downward and forward by bending the spine at the waist (stooping)	3 2 1 N	_____	_____
31. Bend legs at the knees to come to rest on the knee or knees (kneeling)	3 2 1 N	_____	_____
32. Bend body downward and forward by bending the legs and spine (crouching)	3 2 1 N	_____	_____
33. Move about on the hands and knees or hands and feet (crawling)	3 2 1 N	_____	_____
34. Extend the hands and arms in any direction (reaching)	3 2 1 N	_____	_____
35. Seize, hold, grasp, turn or other wise work with the hand or hands (handling)	3 2 1 N	_____	_____
36. Pick, pinch, or otherwise work with the fingers (fingering)	3 2 1 N	_____	_____
37. Perceive size, shape, temperature or texture of objects and materials by using fingertips (feeling)	3 2 1 N	_____	_____

GENERIC ASSESSMENT
ACCESS SKILLS CHECKLIST

Student Name/ID _____ Sending School _____

Instructor _____ Date(s) Evaluated _____

Circle proper mastery code: 3 = MASTERY 2 = REQUIRES SUPERVISION
1 = NOT MASTERED N or blank = NO EXPOSURE

TASK DESCRIPTION	MASTERY CODE	MASTERY DATE	RETRY CODE/DATE
WORKING ENVIRONMENT			
38. Ability to work inside	3 2 1 N	_____	_____
39. Ability to work both inside and outside	3 2 1 N	_____	_____
40. Ability to work in wet and humid conditions	3 2 1 N	_____	_____
41. Ability to work in extreme noise, constant or intermittent, causing marked distraction or possibly injury to hearing	3 2 1 N	_____	_____
42. Ability to work in extreme vibration, i.e., strain on body or extremities from repeated motion or shock	3 2 1 N	_____	_____
43. Ability to work in hazardous situations, i.e., risk of bodily injury	3 2 1 N	_____	_____
44. Ability to work in hazardous conditions, i.e., fumes, odors, toxic conditions, dust and poor ventilation	3 2 1 N	_____	_____
APTITUDES			
45. Think visually of geometric forms (S-spatial)	3 2 1 N	_____	_____
46. Comprehend the two dimensional representation of three-dimensional objects (S-spatial)	3 2 1 N	_____	_____
47. Recognize the relationship resulting from the movements of objects in space (S-spatial)	3 2 1 N	_____	_____
48. Perceive pertinent detail in objects in pictorial or graphic material (P-form perception)	3 2 1 N	_____	_____
49. Make visual comparisons and discriminations and see slight differences (P-form perception)	3 2 1 N	_____	_____
50. Perceive pertinent detail in written or tabular materials (Q-clerical perception)	3 2 1 N	_____	_____
51. Coordinate eyes and hands or fingers rapidly and accurately (K-motor coordination)	3 2 1 N	_____	_____
52. Make a movement response accurately and swiftly (K-motor coordination)	3 2 1 N	_____	_____

GENERIC ASSESSMENT
ACCESS SKILLS CHECKLIST

Student Name/ID _____ Sending School _____

Instructor _____ Date(s) Evaluated _____

Circle proper mastery code: 3 = MASTERY 2 = REQUIRES SUPERVISION
1 = NOT MASTERED N or blank = NO EXPOSURE

TASK DESCRIPTION	MASTERY CODE	MASTERY DATE	RETRY CODE/DATE
53. Move the fingers and manipulate small objects with the fingers, rapidly or accurately (F-finger dexterity)	3 2 1 N	_____	_____
54. Move the hands easily and skill fully (M-manual dexterity)	3 2 1 N	_____	_____
55. Work with the hands in placing and turning motions (M-manual dexterity)	3 2 1 N	_____	_____
56. Match or discriminate between colors	3 2 1 N	_____	_____
57. Identify a particular color or color combination	3 2 1 N	_____	_____
58. Perceive contrasting color combinations	3 2 1 N	_____	_____
TEMPERAMENT			
59. Influence people in their opinions, attitudes, or judgments about ideas of things	3 2 1 N	_____	_____
60. Making generalizations, evaluations, or decisions based on sensory or judgmental criteria	3 2 1 N	_____	_____
61. Making generalizations, evaluations, or decisions based on measurable or verifiable criteria	3 2 1 N	_____	_____
62. Dealing with people beyond giving and receiving instructions	3 2 1 N	_____	_____
63. Performing repetitive work, or performing continuously the same work, according to set procedures, sequences, or pace	3 2 1 N	_____	_____
64. Performing under stress when confronted with emergency critical, unusual, or dangerous situations, or situations in which working speed and sustained attention are make-or-break aspects of the job	3 2 1 N	_____	_____
65. Situations requiring the precise attainment of set limits, toler ances, or standards	3 2 1 N	_____	_____
66. Performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure	3 2 1 N	_____	_____

GENERIC ASSESSMENT
ACCESS SKILLS CHECKLIST

Student Name/ID _____ Sending School _____

Instructor _____ Date(s) Evaluated _____

Circle proper mastery code: 3 = MASTERY 2 = REQUIRES SUPERVISION
1 = NOT MASTERED N or blank = NO EXPOSURE

TASK DESCRIPTION	MASTERY CODE	MASTERY DATE	RETRY CODE/DATE
VOCATIONAL			
67. Demonstrate knowledge of basic safety concepts	3 2 1 N	_____	_____

MATH SKILLS

The Math ACCESS SKILLS are those basic math abilities that are associated with the vocational education/occupation areas identified within the ACCESS SKILLS: Vocational Readiness Series. These skills include counting, addition, subtraction, multiplication, division, fractions, decimals, percentage, discount, interest, and calculating surface areas, weights, and measures.

The math skills can easily be assessed by the student's math teacher. Reviewing the student's file for math achievement test scores can also provide clues as to the student's math skills. The informal math skills test included in this section (see Exhibit 1) is another useful means for assessment. This test has been developed to assess each of the identified Math ACCESS SKILLS areas. An answer key is provided for this test (see Exhibit 2).

Not every Math ACCESS SKILL area is determined necessary for all the vocational program areas. Although a vocational program area relating to a student's interest may not include all the math skills, it is strongly recommended that the student perform the entire informal math skills test. This will allow for a better understanding of the student's math ability and, in the event the student's vocational program direction changes, math skills information for another vocational program will have been determined.

Exhibit 1

MATH SKILLS

Count two-place numbers

Fill in the spaces.

11 _____ _____ 14 _____ _____ 17 _____ _____ _____

_____ 22 _____ _____ _____ 26 _____ _____ _____ _____

31 _____ _____ _____ _____ _____ 37 _____ _____ _____

_____ _____ 43 _____ _____ _____ _____ _____ _____ _____

Circle the greatest number.

(87 93) (7 2) (10 19)

(44 23) (19 14) (6 9)

Addition

1.) 27 + 52

2.) 74 + 67

3.) 58 + 19

4.) $\frac{3}{5} + \frac{1}{3}$

5.) $\frac{7}{16} + \frac{3}{8}$

6.) $\frac{3}{7} + \frac{1}{2}$

7.) $3.7 + 8.9 =$ _____ 8.) $.78 + 5.4 =$ _____

9.) $7.2 + 2.8 =$ _____

Subtraction

1.) $\begin{array}{r} 74 \\ -\ 13 \\ \hline \end{array}$ 2.) $\begin{array}{r} 52 \\ -\ 28 \\ \hline \end{array}$ 3.) $\begin{array}{r} 67 \\ -\ 49 \\ \hline \end{array}$

4.) $\begin{array}{r} \frac{7}{9} \\ -\ \frac{4}{9} \\ \hline \end{array}$ 5.) $\begin{array}{r} \frac{5}{9} \\ -\ \frac{1}{2} \\ \hline \end{array}$ 6.) $\begin{array}{r} \frac{5}{8} \\ -\ \frac{1}{3} \\ \hline \end{array}$

7.) $4.2 - 3.1 =$ _____ 8.) $8.1 - .27 =$ _____

9.) $2.7 - .95 =$ _____

Multiplication

1.) 30
x 17

2.) 53
x 22

3.) 63
x 43

4.) $\frac{1}{4} \times \frac{1}{8} =$ _____

5.) $\frac{3}{7} \times \frac{2}{3} =$ _____

6.) $\frac{2}{9} \times \frac{3}{4} =$ _____

7.) 42
x .13

8.) 75
x 1.6

9.) .88
x 3.1

Division

1.) $9 \overline{)81}$

2.) $36 \overline{)432}$

3.) $7 \overline{)133}$

4.) $\frac{7}{9} \div \frac{2}{3} =$ _____

5.) $\frac{4}{5} \div \frac{3}{4} =$ _____

6.) $\frac{2}{7} \div \frac{9}{14} =$ _____

7.) $7 \overline{)4.41}$

8.) $13 \overline{)27.56}$

9.) $.22 \overline{)42.24}$

24

Perform standard units of measurement, i.e., cup, pint, quart, inch, foot, yard, ounce, pound

1.) A gallon contains: _____ quarts; _____ pints; _____ cups.

2.) 6 yards contain: _____ feet; _____ inches.

3.) How many ounces are in 6 pounds 3 ounces? _____

4.) Which is heavier? (Please check the heaviest book.)

A book that weighs 2 pounds 4 ounces _____ or

A book that weights 40 ounces _____

5.) There are _____ cups in a quart.

There are _____ pints in one-half gallon.

6.) There are _____ inches in 7 feet.

There are _____ feet in 10 yards 2 feet.

Use basic measuring instruments, i.e., rulers, scales

Ruler measuring skills

Use a ruler to measure the following lines:

ANSWERS

MATERIALS:
12 or 6 inch ruler that has gradations to 1/16 inch

1.) _____ _____

2.) _____ _____

3.) _____ _____

4.) _____ _____

5.) _____ _____

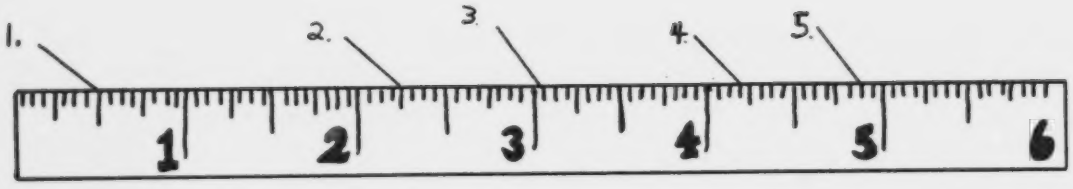
6.) Draw a line 3 inches long.

7.) Draw a line 2 1/2 inches long.

8.) Draw a line 2 7/8 inches long.

9.) Draw a line 3 13/16 inches long.

10.) Draw a line 2 1/8 inches long.

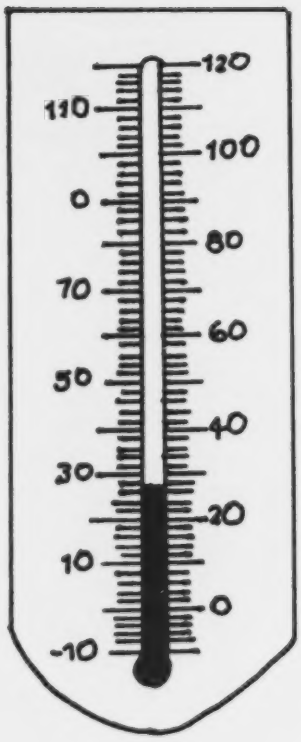


Indicate the exact measurement (include inches).

1.) _____ 2.) _____ 3.) _____

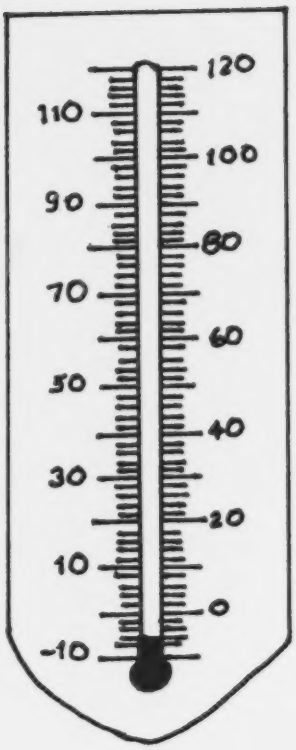
4.) _____ 5.) _____

Indicate the following temperatures in the spaces below:



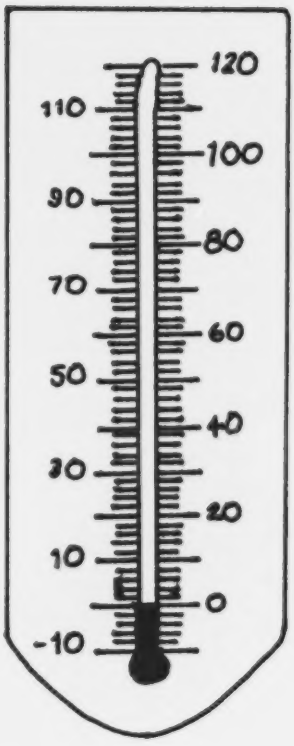
This temperature is:

1.) _____



This temperature is:

2.) _____



This temperature is:

3.) _____

Other informal ways to assess measuring skills include:

1.) Using a sterile oral thermometer, have student take his/her temperature, the teacher's, and/or other student's, and read the results.

MATERIALS: Thermometer may be obtained from the school nurse.

2.) With a weight scale, have student weight himself/herself and/or observe the dial as others are on the scale. Observe the scale dial as the student reports the weight(s).

Bathroom scales may be otained from the school nurse.

3.) Using a carpenter tape, have student measure various objects (desk tops, door widths, etc.) and record the measurements.

Tape measure may be obtained from industrial arts classroom or from the custodian.

Discount, interest and percentage

1.) A bicycle regularly sells for $125.00. With a 20% discount, what will the new price be?

2.) What is the discount for a ball glove that normally sold for $24.00 but now sells for $18.00?

3.) A credit card company adds 18% to bills that are not paid within a 30 day period. If a person is unable to pay any of his/her bill of $56.00 until after 30 days, what is the total charge of the bill?

4.) Bill had 16 pieces of candy. He gave away 6. What percent of the total amount of candy did he give away?

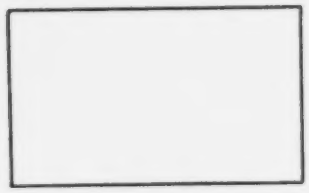
5.) Jenny received a total of $57.00 for her birthday. She decided to save 70% and spend the remaining 30%. How much money did Jenny save?

6.) If a woman deposits $1,000.00 into a savings account that earns 6% interest each year and she withdraws the interest each year, how much interest will she have earned after 3 years?

Surface areas, values, weights and measures

Compute the following surface areas.

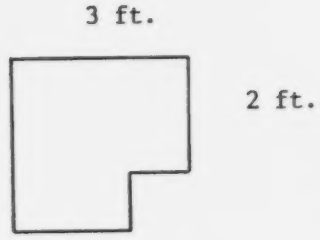
1.)



Area = _____

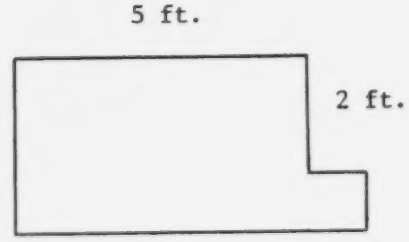
(width x length)

2.)



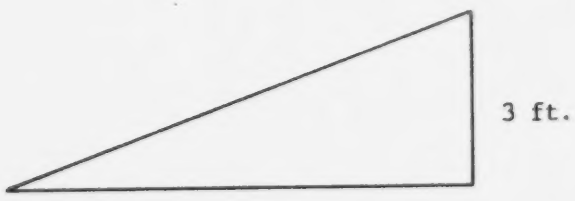
Area = _____

3.)



Area = _____

4.)



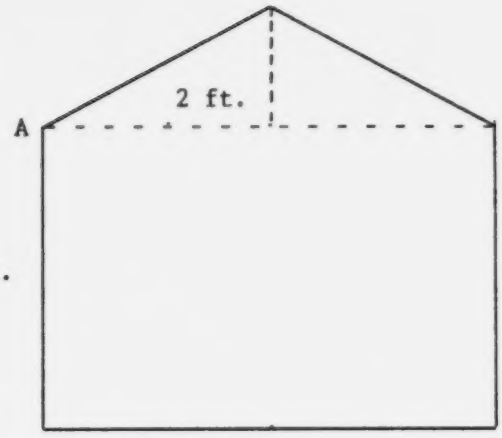
Area = _____

1/2(base x height)

5.)

Area = _____
xr
(= 3.14)

6.)



Find the area of:

Rectangle part = _____

Triangle part = _____

Total area = _____

7.) (Multiplication and division problem of surface areas)

a. A carpet laying company has been hired to carpet all 30 rooms of a motel. All rooms have the same measured floor space: L = 40 ft., W = 30 ft. How many square feet of carpet will it take to cover all thirty rooms?

b. The owners of the same motel decide that they want one-fourth of the rooms to have red carpet; another fourth of the rooms to have blue carpet; and half of the rooms to have brown carpet. How many square feet of each color is need for the motel rooms?

Measurement problems [Pay attention to the signs (+, -, -, x).]

Measurement problems [Pay attention to the signs (+, -, ÷, x).]

1.) 6 feet 3 inches
+ 5 feet 9 inches

feet inches

2.) 9 feet 2 inches
- 2 feet 10 inches

feet inches

3.) 3 hours 12 minutes
+ 16 hours 53 minutes

hours minutes

4.) 15 hours 25 minutes
- 14 hours 26 minutes

hours minutes

5.) 6 pounds 7 ounces
+ 12 pounds 10 ounces

pounds ounces

6.) 3 pounds 6 ounces
- 1 pound 10 ounces

pounds ounces

7.) 9 feet 6 inches x 3 = _____ feet _____ inches

8.) 4 hours 15 minutes x 4 = _____ hours _____ minutes

9.) 3 pounds 8 ounces x 3 = _____ pounds _____ ounces

10.) 8 feet 4 inches ÷ 4 = _____ feet _____ inches

11.) 15 hours 30 minutes ÷ 3 = _____ hours _____ minutes

12.) 25 pounds 10 ounces ÷ 5 = _____ pounds _____ ounces

Exhibit 2

MATH SKILLS Answer Key

Addition	Subtraction	Multiplication	Division
1.) 79	1.) 61	1.) 510	1.) 9
2.) 141	2.) 24	2.) 1,166	2.) 12
3.) 77	3.) 18	3.) 2,709	3.) 19
4.) 14/15	4.) 3/9, 1/3	4.) 1/32	4.) 1 1/6
5.) 13/16	5.) 1/18	5.) 6/21, 2/7	5.) 1 1/15
6.) 13/14	6.) 7/24	6.) 6/36, 1/6	6.) 4/9
7.) 12.6	7.) 1.1	7.) 5.46	7.) .63
8.) 6.18	8.) 7.83	8.) 120.0	8.) 2.12
9.) 10.0	9.) 1.75	9.) 2.728	9.) 192

Perform standard units of measurement, i.e., cup, pint, quart, inch, foot, yard, ounce, pound

1.) 4; 8; 16	3.) 99	5.) 4; 4
2.) 18; 216	4.) 40 ounces	6.) 84; 32

Use basic measuring instruments, i.e., rulers, scales

Ruler measuring skills

1.) 2 1/2 inches
2.) 3 inches
3.) 2 inches
4.) 2 1/4 inches
5.) 2 13/16 inches

6-10 must be checked by instructor for accuracy.

Reading points on the ruler

1.) 1/2 inch
2.) 2 1/4 inch
3.) 3 1/16 inch
4.) 4 3/16 inch
5.) 4 7/8 inch

Thermometer Reading

1.) 27 degrees	2.) -6 degrees	3.) 0 degrees

Discount, interest and percentage

1.) $100.00	3.) $66.08	5.) $39.90
2.) 25%	4.) 37% or 38%	6.) $180.00

Surface areas, values, weights and measures

1.) 15 sq. ft.	5.) 12.56 sq. in.	7b) 9,000 red; 9,000 blue; 18,000 brown
2.) 8 sq. ft.	6.) 48 sq. ft.; 8 sq. ft.; 56 sq. ft.	
3.) 16 sq. ft.		
4.) 12 sq. ft.	7a) 36,000 sq. ft.	

Measurement Problems

1.) 12 ft. 0 inches	5.) 19 pounds 1 oz.	9.) 10 pounds 8 oz.
2.) 6 ft. 4 inches	6.) 1 pound 12 oz.	10.) 2 ft. 1 inch
3.) 20 hrs. 5 minutes	7.) 28 ft. 6 inches	11.) 5 hrs. 10 minutes
4.) 0 hrs. 59 minutes	8.) 17 hrs. 0 minutes	12.) 5 pounds 2 oz.

PHYSICAL DEMANDS

Prior to performing any of the physical capacity informal assessments, interview the student to obtain a self report of his/her physical/medical status. This information needs to be documented. It is also strongly recommended to review the student's cumulative file to determine the student's medical/health status and to interview the student's parents/guardians concerning the student's physical well being.

Much of the physical demand information can be obtained through observation by the student's teacher(s), parents, and other significant personnel. Interviewing the parents and/or providing them with an observation checklist based on their home observations may also be a fruitful means of informally assessing physical capacities (see Exhibit 1).

It must be noted that these ACCESS SKILLS are negotiable and students who do not possess the physical capacities to meet a given vocational program's physical demands may still enter the program. Through assessment deficient areas can be determined and vocational instructors and support personnel can continue to work on the skills during training. If further training will not improve a student's physical abilities, the instructors and resource personnel need to determine alternative methods and modifications to promote the student's learning and skill attainment within his/her individual physical capacities.

The Physical Demands ACCESS SKILLS are as follows:

Lift 10 lbs. maximum and occasionally lifting and/or carrying small articles, i.e., tools, ledgers (sedentary work)
Lift 20 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 10 lbs. (light work)
Lift 50 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 25 lbs. (Medium work)
Lift 100 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 50 lbs. (heavy work)
Ascend or descend, i.e., ladders, stairs, scaffolding, using the feet and legs and/or hands and arms (climbing)
Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)
Bend body downward and forward by bending the spine at the waist (stooping)
Bend legs at the knees to come to rest on the knee or knees (kneeling)
Bend body downward and forward by bending the legs and spine (crouching)
Move about on the hands and knees or hands and feet (crawling)
Extend the hands and arms in any direction (reaching)
Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)
Pick, pinch, or otherwise work with the fingers (fingering)
Perceive size, shape, temperature or texture of objects and materials by using fingertips (feeling)

The following informal assessment tasks are some suggested ways to assess physical capacities. The importance is to determine whether or not the student has the physical ability to perform the ACCESS SKILL that is correlated to the physical demands of the training program/occupation. There are numerous ways to assess the given skill, therefore expansion or generation of new tasks that will assess these ACCESS SKILLS is encouraged.

Lift 10 lbs. maximum and occasionally lifting and/or carrying small articles, i.e., tools, ledgers (sedentary work)

Task #2 also assesses the following ACCESS SKILLS:

- Extend the hands and arms in any direction (reaching)
- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Assessment Tasks	Materials
1. Student will lift from the floor a 10 lb. weight while standing to an upright position. Student will hold the weight for 15 seconds. (In observing the student on the following lifting tasks, assess his/her knowledge of correct lifting techniques. See Exhibit 2 at the end of this section.)	10 lb. weight, possibly obtained from a barbell set (available from physical education dept.) or a coffee can, box, or bucket filled with sand or water to equal 10 lbs.
2. While sitting at a desk, student will place various desk related items in their original locations. Arrange the setting so that the student will be required to fully extend the arms to grasp the items. Position the items to the left, right, and, if possible, above the student (on an elevated shelf).	One cardboard box, desk calendar, desk stapler, 3-hole punch, scotch tape dispenser, etc.

Lift 20 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 10 lbs. (light work)

Task #1 also assesses the following ACCESS SKILLS:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)
- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)
- Bend body downward and forward by bending the legs and spine (crouching) (See Figure 1 below.)

Figure 1 - CROUCHING

Task #2 also assesses the following ACCESS SKILLS:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)
- Extend the hands and arms in any direction (reaching)
- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Task #3 also assesses the following ACCESS SKILL:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

Assessment Tasks	Materials
1. Student will assemble barbell with weights equalling 20 lbs. (Have student assume the crouching position illustrated in Figure 1 when assembling the barbell.) Student will lift the barbell from the floor while standing to an upright position. NOTE: Be sure that the student is aware of and can utilize correct lifting techniques. (See Exhibit 2 at the end of this section.)	Weights, bar, and attachments to equal 20 lbs. (available possibly from the physical education dept.)
2. Student will move a set of encyclopedias, alternating between carrying 1, 2, and 3 at a time, from one part of the room to another part of the room.	Encyclopedia set (Britannica) or some equivalent size and amount of books
3. Student will lift and carry, one at a time, 6 one-gallon milk cartons filled with water (weighing approximately 8 pounds) off the floor and place them on a table approximately 20 feet away.	6 one-gallon milk cartons
4. Student will lift a box weighing 20 lbs. from the floor to a table top located across the room.	Cardboard box, materials weighed out to 20 lbs. (e.g. bricks, sand, etc.)

Lift 50 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 25 lbs. (Medium work)

(Standing for extended periods of time and continuous walking are involved in many occupations requiring medium work.)

IMPORTANT!! Prior to performing the following lifting tasks, ensure that the student is aware of and can perform correct lifting techniques. (See Exhibit 2 at the end of this section.)

Task #1 also assesses the following ACCESS SKILLS:

- Bend legs at the knees to come to rest on the knee or knees (kneeling)
- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Task #2 also assesses the following ACCESS SKILL:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

Assessment Tasks	Materials
1. Student will kneel on one or both knees to assemble the barbell with weights equalling 50 lbs. Student will then lift the weight off the floor, using correct lifting techniques, to an upright standing position and hold for 5-10 seconds. (See Figure 2 below.)	Weights, bar, and attachments equalling 50 lbs. (available from physical education dept.)

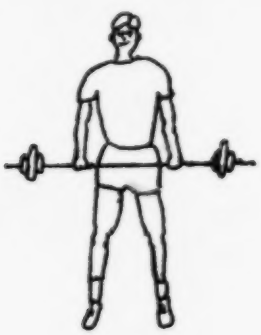


Figure 2

2. (A.) Student will lift and carry, one in each hand, one-gallon milk cartons filled with water (12 total) off the floor and to a table positioned approximately 20 feet away.	12 one-gallon milk cartons
(B.) To assess the ability to safely direct movement of placing weighted objects, have student lift the weight off the floor and place it on a table located directly behind him/her. (For correct "direction of movement" procedures, see Exhibit 3 at the end of this section.)	12 one-gallon milk cartons

3.	Student will lift a box weighing 50 lbs. from the floor to a table top	Sturdy cardboard box that will accomodate 50 lbs. of weight, materials weighed out to 50 lbs, (e.g. bricks, sand, etc.)

Lift 100 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 50 lbs. (heavy work)

(Walking and standing for prolonged periods of time are often involved with jobs requiring heavy work.)

IMPORTANT!! Prior to performing the following lifting tasks, ensure that the student is aware of and can perform correct lifting techniques. (See Exhibit 2 at the end of this section.)

Task #1 also assesses the following ACCESS SKILLS:

- Bend legs at the knees to come to rest on the knee or knees (kneeling)
- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Task #2 also assesses the following ACCESS SKILL:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

	Assessment Tasks	Materials
1.	Student will kneel on one or both knees to assemble the barbell with weights equalling 100 lbs. Student will then lift the weight off the floor, using correct lifting techniques, to an upright standing position and hold for 5-10 seconds. (See Figure 3 below.)	Weights, bar, and attachments equalling 100 lbs. (available from physical education dept.)

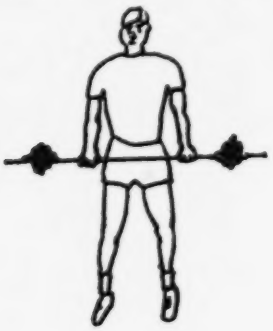


Figure 3

2.	Utilizing two 5-gallon buckets filled 3/4 with water (approximately 30 lbs. each, 60 lbs. total), student will lift and carry, using correct lifting techniques, one bucket in each hand for 20-30 feet.	Two 5-gallon buckets
3.	Student will lift from the floor, using correct lifting techniques, a box weighing 100 lbs. to an upright standing position and hold for 5 - 10 seconds.	Sturdy box that will accomodate 100 lbs. of weight, material weighed out to 100 lbs. (e.g. bricks, sand, etc.)

Ascend or descend, i.e., ladders, stairs, scaffolding, using the feet and legs and/or hands and arms (climbing)

Much of this information can be obtained through direct observation of the student in class and in naturalistic environments. Interviewing the physical education instructor and/or observing the student in gym class may provide information on how coordinated the student is in performing such activities related to the ability to climb.

Interviewing the student's parents may generate fruitful information concerning the student's climbing ability. Ask the parents if the student climbs trees, has the ability to ascend stairs, etc. (See Exhibit 1 at the end of this section.)

Task #1 also assesses the following ACCESS SKILL:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

	Assessment Tasks	Materials
1.	Student will ascend a minimum of two flights of stairs.	Gymnasium stands or auditorium steps
2.	Student will climb, unassisted, up and down a a ladder.	A 7'-9' painters ladder (possibly available from shop class or custodian)

Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

Much of this information can be obtained through direct observation of the student in class and in naturalistic environments. Interviewing the physical education instructor and/or observing the student in gym class may provide information on how coordinated the student is in performing activities involving balance (e.g., tumbling and other gymnastic activities.)

Interviewing the student's parents may generate fruitful information concerning the student's balancing ability. Ask the parents if the student is proficient at riding a bicycle, a skateboard, if he/she runs when playing, etc. (See Exhibit 1 at the end of this section.)

Assessment Tasks	Materials
1. Student will walk in a straight line (following tape put on the floor) while carrying a tray of plastic/paper cups filled with water.	Plastic/metal tray (cafeteria tray) or baker's sheet, etc. with several paper or plastic cups
2. Student will crouch and maintain this position for approximately 30 seconds. (See Figure 4 below.) Note how steady student maintains this position.	

Figure 4

3. In an open, flat area, designate a start line and a finish line approximately 50-60 feet apart. Have student run from start to finish. Observe student's coordination and balance as he/she runs.	Basketball court floor, parking lot, football field, softball field, etc.

Bend body downward and forward by bending the spine at the waist (stooping)

Task #1 also assesses the following ACCESS SKILL:
- Pick, pinch, or otherwise work with the fingers (fingering)

Assessment Tasks	Materials
1. Student will bend at waist, keeping knees relatively straight (see Figure 5 below), while working on an assortment task located on a bench or chair (a level that assesses student's posture). Student will remain in this position for 3 minutes. At the completion of this time limit, student will raise up. Ask student if he/she is experiencing any discomfort and document the response.	Cake pan with numerous assorted items, e.g., buttons, paper clips, thumbtacks, rubber bands, etc., small jars or envelopes to put the sorted items into (there should be enough items to keep student occupied for at least 3 minutes)

Figure 5 - STOOPING

Bend legs at the knees to come to rest on the knee or knees (kneeling)

Task #1 and Task #2 also assess the following ACCESS SKILL:
- Pick, pinch, or otherwise work with the fingers (fingering)

Assessment Tasks	Materials
1. Student will kneel on one knee and lace and tie the shoe on the opposite foot. Repeat this procedure with the other foot. After student has completed this task, ask if he/she is experiencing any discomfort and document the response.	Student must have shoes with laces, if not, have student perform a simple activity in the described position
2. Student will kneel on both knees on the floor while working on a sorting task for 3 minutes. At the completion of this time limit, student will raise up to a standing position. Ask the student if he/she is experiencing any discomfort and document the response.	Cake pan with numerous assorted items, e.g., buttons, paper clips, thumbtacks, rubber bands, etc., small jars or envelopes to put the sorted items into (there should be enough items to keep student occupied for at least 3 minutes)

Bend body downward and forward by bending the legs and spine (crouching)

Task #1 also assesses the following ACCESS SKILLS:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)
- Pick, pinch, or otherwise work with the fingers (fingering)

Assessment Tasks	Materials
1. Student will perform a sorting task in a "crouching" position (see Figure 6 below). Student will remain in this position for 3 minutes. At the completion of this time limit, ask the student if he/she is experiencing any discomfort and document the response.	Cake pan with numerous assorted items, e.g., buttons, paper clips, thumbtacks, rubber bands, etc., small jars or envelopes to put the sorted items into (there should be enough items to keep student occupied for at least 3 minutes)

Figure 6 - CROUCHING

Move about on the hands and knees or hands and feet (crawling)

Assessment Tasks	Materials
1. Student will crawl approximately 30 feet on hands and knees.	An open space is needed so student can crawl without obstruction
2. Student will crawl approximately 20 feet on hands and feet.	An open space is needed so student can crawl without obstruction.
NOTE: At the completion of each of these tasks, ask the student if he/she is experiencing any discomfort and document the response.	

Extend the hands and arms in any direction (reaching)

Task #1 also assesses the following ACCESS SKILL:

- Maintain body equilibrium to prevent falling when walking, standing, crouching or running (balancing)

Task #2 also assesses the following ACCESS SKILL:

- Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Assessment Tasks	Materials
1. Student will stand and fully extend his/her arms to the front, the sides, and above the head. Student will do this 3-4 times. As student is performing this task, observe for "fluidity" in the student's motions. At the completion of this task, ask the student if he/she is experiencing any discomfort and document the response.	
2. Student will sit at a table or large desk with 4 stacks of 8 1/2" x 11" typing paper with 25 sheets in each stack positioned so that he/she will have to fully extend the arm(s) to reach a stack. The stacks will extend from student's left to his/her right (see Figure 7 below). Student will collate the stacks from left to right, staple the 4 sheets together, and place each stapled set into a box positioned far enough away so he/she has to fully extend his/her arm to reach it.	100 sheets of 8 1/2" x 11" paper, stapler, cardboard box

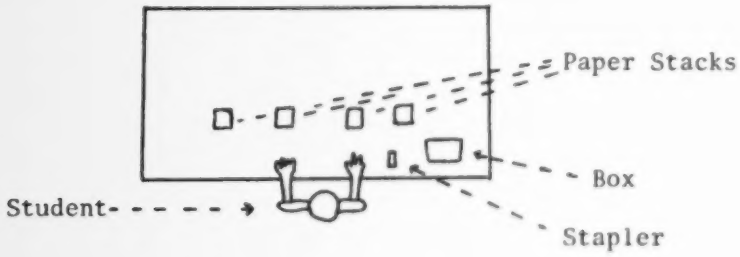


Figure 7

Seize, hold, grasp, turn or otherwise work with the hand or hands (handling)

Assessment Tasks	Materials
1. Student will sit at a table or large desk with 10 various size jars in front of him/her without the lids on. Student will sort through a box with the 10 lids in it to locate and screw on the lids of each of the 10 jars. Student will then place the jars into a large cardboard box positioned nearby. As student is working, observe his/her manual coordination and ability to utilize twisting and placing motions.	10 jars with screw-on lids (e.g., peanut butter jars, jelly jars, etc.), 1 small cardboard box, 1 large cardboard box that will hold the 10 jars

2.	Student will sit at a table or large desk and perform the following task using 10 sheets of 8 1/2" x 11" paper, pen/pencil, ruler, scissors, stapler, and scotch tape. The task involves the following steps: a. Take the ruler and draw 2 lines that bisect the middle of the paper (it may be necessary to demonstrate the steps to the student). b. Take the scissors and cut along the lines drawn to make 4 pieces. c. Arrange the 4 pieces so that 2 sides are even and staple this corner together. d. Tape the stapled paper to the table top. (Tape subsequent stapled paper to the right of the first one and so on until all 10 have been completed). e. Repeat steps a-d until all the paper has been marked, cut, stapled, and taped to the table.	10 sheets of 8 1/2" x 11" paper, pen/pencil, ruler, scissors, stapler, scotch tape

Pick, pinch, or otherwise work with the fingers (fingering)

	Assessment Tasks	Materials
1.	Student will sit at a desk with a shoe/bootlace with one end knotted and a box of beads. Student will place beads on the shoe/bootlace and, when shoe/bootlace is full of beads, tie the end into a knot.	Box of various size beads, shoe/bootlace (the longer, the better --allows for more observation of student's fingering ability)
2.	Student will sort numerous items which are mixed together in a cake pan into separate jars for each item.	Cake pan (or something similar), beads, paper clips, buttons, rubber bands, thumbtacks, etc., enough jars or containers of some sort to hold each of the items used in the sorting task

Perceive size, shape, temperature or texture of objects and materials by using fingertips (feeling)

Assessment Tasks	Materials
1. Student will sit at a desk or table either behind a shield devised to prevent student from viewing the objects he/she will be feeling or blindfolded. (See Exhibit 4 for making a shield.) Student will then be presented with various objects and items to discriminate among using the sense of touch (feeling).	Shield or dark cloth for a blindfold
a. Present to the student a box containing objects of various shapes. Name an object within the box and have student feel for the item in the box. Observe student as he/she sifts through the box to locate the item.	Box (e.g., cigar box), various items (e.g., small rubber ball, jack, baby toy block, pencil, plastic ink pen, etc.)
b. Present to the student 4 pieces of sandpaper, each having a different degree of roughness. Have student arrange them in order of roughness based on his/her sense of touch.	Sandpaper, 4 distinct grades of roughness--very fine to very rough (obtained from industrial arts classroom)
c. Present to the student like objects of various sizes. Have him/her arrange them in serial order.	Pencils of various lengths, buttons of various sizes, bolts or nuts of various sizes, etc.
d. Present to the student 3 cups filled with water (one containing ice, one containing cool tap water, one containing warm tap water--not hot water). Have student determine by touch which is the hottest, coldest, etc.	3 paper/plastic cups, access to tap water, ice

Exhibit 1

Parental Checklist

To better prepare for your son's or daughter's vocational future, understanding his or her vocational related skills and abilities is essential. In vocational preparation, either for vocational training or immediate job placement upon completing high school, there are many areas that need to be considered besides having an interest in a particular occupational area. The student's physical capacities must be known so that his or her abilities match the demands of the potential job(s). The following checklist/questionnaire covers basic physical capacity conditions that have been determined to be components of numerous occupations.

In completing this checklist/questionnaire, if you come to an item that your son or daughter has difficulty with, but can tolerate or has the ability to accomplish it through modification, please indicate this.

Physical Capacities

	YES	NO	NOT SURE
1. Can your son/daughter:			
- Lift 10 pounds and carry small articles without experiencing discomfort (for example: set the table, carry books, etc.)?	____	____	____
- Lift 20 pounds and carry objects weighing up to 10 pounds (lifting and carrying younger siblings, moving light furniture, etc.)?	____	____	____
- Lift 50 pounds maximum and carry objects weighing up to 25 pounds (siblings, taking out trash, weights, etc.)?	____	____	____
- Lift 100 pounds and carry objects weighing up to 50 pounds (siblings, moving furniture, sack of dog food, etc.)?	____	____	____

Please respond to the following questions:

2. Is your son/daughter able to climb utilizing his/her feet and legs and/or hands and arms with coordination? (ascending and descending ladders, stairs and trees)

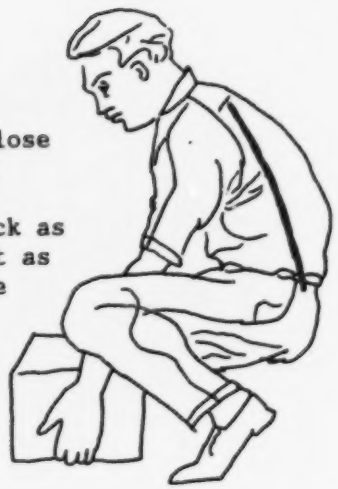
3. Does your son/daughter demonstrate a sense of balance? For example, does he/she maintain balance when walking, running, standing? Can he/she skillfully ride a bicycle, skateboard or scooter?

Many jobs require the physical capacities to continuously move around and to assume various body positions in carrying out the job's responsibilities? For example, carpenters often have to crawl on the floor when hammering nails into base boards. A seamstress often must crouch or kneel when measuring hemlines. The following physical capacities have been found to be essential body movements/positions in performing certain occupations.

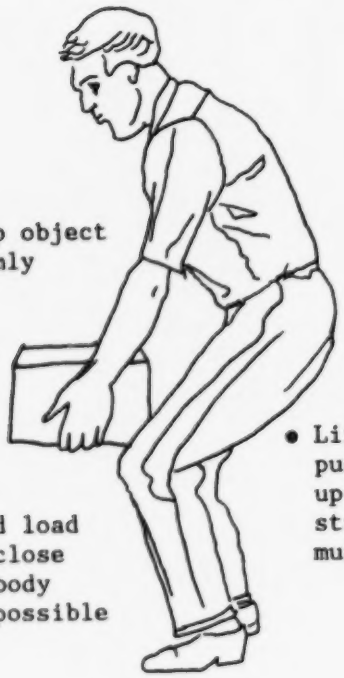
4. Can your son/daughter:	YES	NO	NOT SURE
- Bend his/her body downward and forward by bending at the waist (stooping) without experiencing discomfort?	____	____	____
- Bend his/her legs at the knees to come to rest on the knee or knees and stay in this position for a few minutes without feeling uncomfortable?	____	____	____
- Bend his/her body downward and forward by bending the legs and spine into a crouching position? Can he/she maintain this position for a few minutes without experiencing discomfort?	____	____	____
- Crawl about on the hands and knees or hands and feet?	____	____	____
- Extend his/her hands and arms in any direction without experiencing discomfort?	____	____	____
- Work with his/her hands with movements such as seizing, holding, grasping and turning? (handling cooking and eating utensils, making beds, drive a stick shift car, etc.)	____	____	____
- Utilize his/her fingers with motions such as picking up, pinching and other means of working with the fingers?	____	____	____

Exhibit 2

Correct Lifting Technique



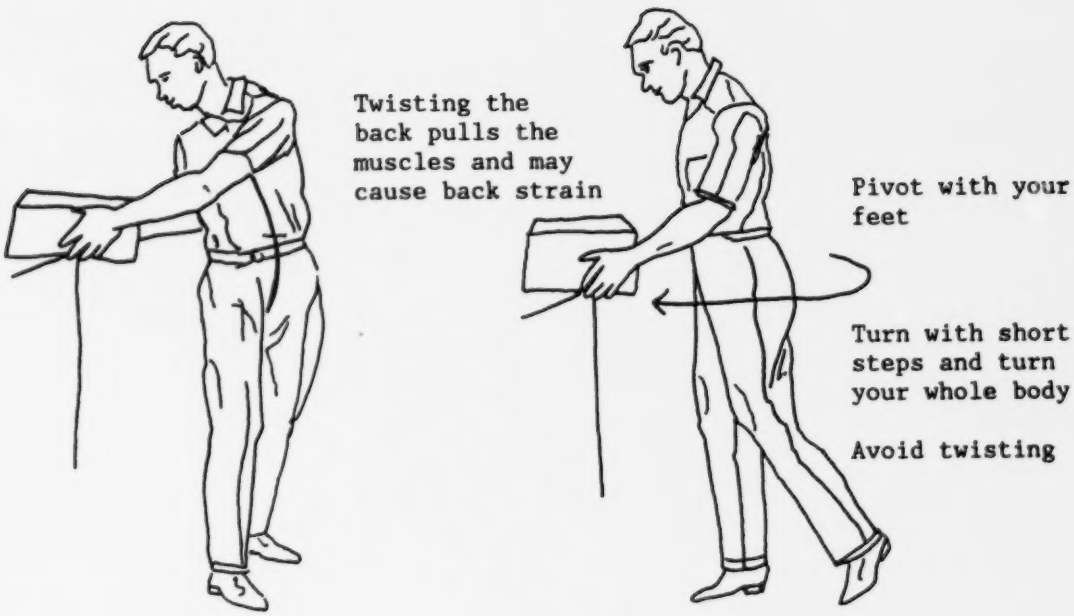
- Squat close to load
- Keep back as straight as possible



- Grip object firmly
- Lift by pushing up with strong leg muscles
- Hold load as close to body as possible

Exhibit 3

DIRECTION OF MOVEMENT

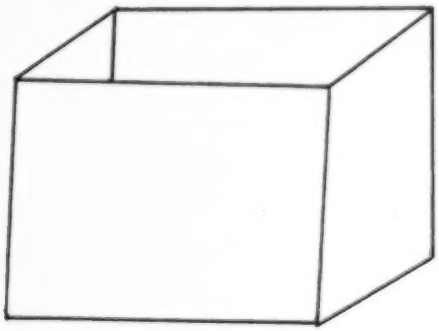

Twisting the back pulls the muscles and may cause back strain
Pivot with your feet
Turn with short steps and turn your whole body
Avoid twisting

Let Your Legs do the Work . . .
Not Your Back

Exhibit 4

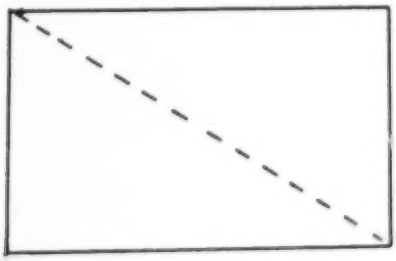
MAKING A SHIELD

Step One Locate a cardboard box that is approximately 14-15" high; 20" or so long.



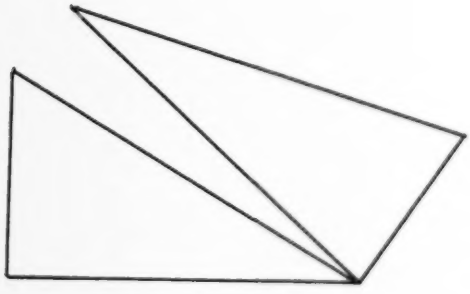
3-Dimensional View

Step Two Draw lines on the box for cutting guides. (Draw the lines on both sides of the box, from the top corner diagonally to the bottom corner.)

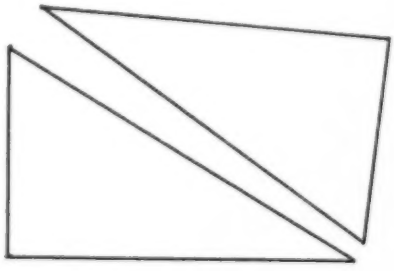


Side View

Step Three With a carpet knife or large sharp scissors, carefully cut the box along the drawn lines. After these cuts have been made, use the knife or scissors to cut the seam that will separate the box into two sections.



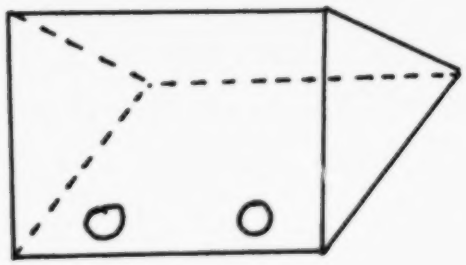
Side View



Side View

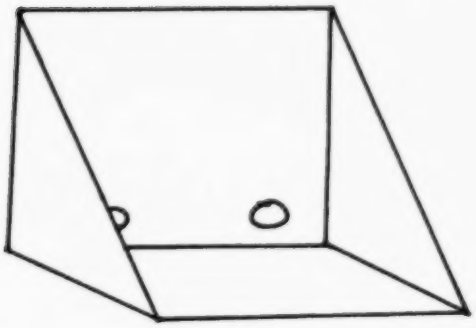
Discard the top, section, i.e., the section without the base of the box.

Step Four Cut out two holes in the front of the shield large enough to allow the student's hands to pass through. Make the holes close to the base of the box.



3-Dimensional Views

Front



Back

WORKING ENVIRONMENT

To appropriately assess the work environment area, it is equally important to understand the student's actual ability to perform within and to tolerate these areas as well as his/her preferences for the various work environment situations. For instance, it may be important to know if a student can physically work in a cold environment regardless of whether or not that particular student likes it. An example would be that of a trained auto mechanic who works in a heated service garage. In stormy, icy weather, he/she may be called upon to work on a car that stalled on a highway. This mechanic's ability to perform in cold weather makes him/her a more valued employee, even though the mechanic may not like the cold weather. The focus on assessing the environmental areas, therefore, must be on the student's ability to tolerate the situation as well as his/her stated or observed interests in the work environment areas.

Much of this information can be obtained through eliciting the assistance of the student's parents via an interview/observation checklist (see Exhibit 1 at the end of this section). Also, through careful observation of the student in everyday situations, tolerable environmental situations may be determined. Finally, conducting an informal interview with the student may generate a wealth of direct and/or inferential material related to the Work Environment ACCESS SKILLS (see Exhibit 2 at the end of this section).

In the Work Environment Student Questionnaire the interviewer needs to pay close attention to the student's answers in terms of the answers' relationships to the various work environment ACCESS SKILLS. It is therefore essential that the interviewer become completely familiar with the Work Environment ACCESS SKILLS so that in the course of a student interview the interviewer can note specific student responses that relate to a work environment ability. The Work Environment ACCESS SKILLS are:

Ability to work inside	Protection from weather conditions but not necessarily from temperature changes
Ability to work both inside and outside	Activities occur inside and outside in approximately equal amounts
Ability to work in wet and humid conditions	Contact with water or other liquids. Atmospheric conditions with moisture content sufficiently high to cause marked bodily discomfort.
Ability to work in extreme noise, constant or intermittent, causing marked distraction or possibly injury to hearing	Sufficient noise to cause marked distraction or possible hearing loss.

Ability to work in extreme vibration, i.e., strain on body or extremities from repeated motion or shock	Sufficient vibration (oscillating movement or strain on the body or its extremities from repeated motion or shock) to cause bodily harm if endured day after day.
Ability to work in hazardous situations, i.e., risk of bodily injury	Conditions or situations in which there is danger to life, health, or bodily injury.
Ability to work in hazardous conditions, i.e., fumes, odors, toxic conditions, dust and poor ventilation	This factor is important only if these conditions are present to a degree or a length of time to cause marked discomfort or possible bodily injury to a worker.

The phrases in parentheses following each question keys the interviewer to a particular work environment ability. To make this questionnaire most effective a dialogue between interviewer and student should exist with the student elaborating on answers and the interviewer utilizing follow up questions to elicit as much information as possible. The questionnaire, therefore, should be used as a guide rather than a strict question/answer format.

Exhibit 1

Work Environment Factors

Different jobs vary greatly in many ways. One area that distinguishes jobs is the work environment. The environment of a computer operator will most assuredly be indoors with the room temperature comfortably regulated. A construction worker, however, likely works in many environments. Depending on the season, the construction worker must be able to adapt to a full range of temperatures. Also, operating power tools and heavy machinery, and standing or walking on scaffolding make the construction worker's environment hazardous.

Understanding a student's tolerance and ability to function in various work environments greatly assists in planning his/her vocational future. Answers to the following questions will provide information that relates to your son/daughter's tolerances and abilities to work in various environments.

1. Does your son/daughter seem to enjoy tasks (work/play) outdoors? Indoors? What are some activities that your son/daughter does outdoors/indoors?

2. On a nice, warm day, how does you son/daughter react to doing a task indoors? Does he/she seem to want to be outside? Or, does he/she seem to be content?

3. Does your son/daughter enjoy outdoor winter activities (sledding, building snowmen, snowball fights, etc.)? Is he/she able to tolerate the cold without experiencing discomfort? Is he/she able to stay out in the cold for long periods of time without experiencing discomfort?

4. Does your son/daughter perform any outside chores or activities in the summer (sports, mowing lawn, raking mowed grass)? Does your son/daughter seem to be able to tolerate the heat while performing the outside activities?

5. Does your son/daughter tolerate being in the rain? (If involved in an outside activity and it starts to rain, will he/she likely continue if possible, or will becoming wet bother him/her?)

6. Does your son/daughter seem to be able to tolerate humid weather/environments? Can he/she function/perform activities in such an environment?

7. Does your son/daughter tolerate loud noises? Does he/she enjoy listening to loud music (does he/she attend rock concerts)? Does he/she tolerate lawn mower engine noise?

8. Does your son/daughter have allergies that make some environments intolerable? If yes, please explain.

Exhibit 2

Work Environment Student Questionnaire

_____ _____

Student Name Date

_____ _____

Age Grade

1. What do you like to do in your spare time? (Encourage student to be descriptive noting inside, outside, or both and other work environment situations.)

2. Describe the way you spend a typical hot summer day. (If outside activities are involved, determine the duration of the outside activities. Ability to work: outside, in heat.)

3. Do you like to be outdoors? What are some of the things you like to do outdoors? (Ability to work outside; possibly heat and/or cold.)

4. Do you enjoy being outside on a cold day? Describe what you generally do on a cold, snowy winter day. (Ability to work outside and in cold. Determine the duration spent outside.)

5. Do you like sports/exercise? Describe some of the sports you enjoy. (Heat. If winter sports involved, can obtain an idea of ability to tolerate variations of temperature.)

6. Have you ever played or worked in the rain? If yes, describe the activity(ies). Did it bother you to get wet? Why? Did you get sick? (Ability to work in wet/humid conditions.)

7. Do you like music? Do you like to play music loudly? Have you ever attended a rock concert? Did the loudness of the concert bother you? (Ability to work in extreme noise.)

8. Are you allergic to anything? If so, what? What does being allergic prevent you from doing? What situation will cause an allergic reaction? Does medication allow you to be around the allergin? (Ability to work around fumes, toxic conditions, dust. Ability to work in some outside conditions.)

9. Describe the chores you do at home. Do you do dishes? Do you mow the lawn? Do you use a push mower or a riding mower? (In describing chores, pay attention to environments that relate to any of the ACCESS SKILLS--for instance dishes related to working in wet environment, mowing lawn relates to several: noise, outside, vibration, and heat.)

10. Do you have a job or did you have a job over summer break? (If yes, explore fully the student's work environment and job description: was the student exposed to excessive noise, e.g., a garage; temperature change, e.g., walking in and out of a freezer; heat, e.g., outside or in a building that is not air conditioned; dust, e.g., sweeping; toxic conditions, e.g., working with varnish in a poorly ventilated area; hazards, e.g., exposed to high voltage, machinery with movable parts, working in high places, etc. If the student was fired or had quit, explore the reasons. Determine if an intolerance to a condition in the environment was the cause.)

APTITUDES

Aptitudes are specific capabilities required of an individual in order to facilitate the learning of some task or job duty.

Determining aptitudes seems to be the most difficult area of informal assessment. On the ACCESS SKILLS list, each aptitude is followed by a letter and name [i.e., (P - form perception)]. These letters correspond to the aptitudes tested on the GATB (General Aptitude Test Battery) for easy reference when reviewing a student's GATB score. The GATB was chosen as it is used in many schools throughout the state of Missouri. However, scores can be obtained for the majority of the aptitudes from most standardized aptitude tests. For more information regarding test instruments, the Career Assessment Instrument Resource Guide is available through the Instructional Materials Laboratory.

When informally assessing aptitudes, it is a good idea to obtain input from parents and other teachers as well as the student. Industrial Arts, Home Economics, Physical Education, and Art teachers would have some observations of finger and manual dexterity, form and spatial perception, and coordination skills. Business Education teachers could speak to clerical aptitudes and attention to detail. A teacher or counselor has many resources to informally assess aptitudes, and, at the same time, to receive input from other teachers regarding not only the student's ability, but his/her behaviors.

A checklist has been developed to assist the teacher in recording the student's performance on the aptitude measures. This checklist allows the teacher to organize the student's performance on the assessment tasks. Upon completion of the checklist, it is possible to transfer the student's overall results on the aptitude measures on to the Generic Assessment ACCESS SKILLS Checklist. See Exhibit 1 for the ACCESS SKILLS Generic Aptitude Informal Assessment Checklist.

The ACCESS SKILLS Aptitudes involve the following:

Think visually of geometric forms (S-spatial)
Comprehend the two dimensional representation of three-dimensional objects (S-spatial)
Recognize the relationship resulting from the movements of objects in space (S-spatial)
Perceive pertinent detail in objects in pictorial or graphic material (P-form perception)
Make visual comparisons and discriminations and see slight differences (P-form perception)
Perceive pertinent detail in written or tabular materials (Q-clerical perception)
Coordinate eyes and hands or fingers rapidly and accurately (K-motor coordination)
Make a movement response accurately and swiftly (K-motor coordination)

Move the fingers and manipulate small objects with the fingers, rapidly or accurately (F-finger dexterity)
Move the hands easily and skillfully (M-manual dexterity)
Work with the hands in placing and turning motions (M-manual dexterity)
Match or discriminate between colors (C-color discrimination) *
Identify a particular color or color combination (C-color discrimination) *
Perceive contrasting color combinations (C-color discrimination) *

* Not assessed by the GATB.

The following informal assessment tasks are some suggested ways to assess the ACCESS SKILLS aptitudes:

S-Spatial: Think visually of geometric forms; comprehend the two-dimensional representation of three-dimensional objects; and recognize the relationship resulting from the movement of objects in space.

Assessment Tasks

1. Student will assemble geometric shapes into a whole.

   MATERIALS: See Exhibit 2 at the end of this section. It will be necessary to make copies of the Figures in Exhibit 1 so that the teacher will have a copy to cut into pieces to be presented to the student. It may be beneficial to enlarge the figures to make the pieces easier to work with. Also, pasting the figure onto construction paper or a manilla folder, then cutting the figure along the lines into pieces will make the figures easier for the student to manipulate.

   Steps

   1. Present the five cut up pieces of Figure #1 (see Exhibit 2) and instruct student to assemble them into a square.

      If student has difficulty, show him/her a picture of an assembled square with the lines drawn. Show this picture for five seconds and then have student again attempt to assemble the square.

   2. If student was successful on the first attempt with Figure #1, remove the assembled pieces of Figure #1 and present him/her with the assorted pieces of Figure #2. Instruct student to assemble these pieces into a square.

      If student is having difficulty assembling Figure #2, present him/her with a picture of the assembled square with the lines drawn. Show this picture for five seconds and then remove it from student's sight. Have student again attempt to assemble the square.

   *If student was unsuccessful on the first attempt of assembling Figure #1, but was successful in his/her second attempt after viewing the completed assembly, follow this procedure:

   Show the picture of Figure #2 completely assembled for five seconds. Then remove this picture and have the student attempt to assemble the pieces into a square.

3. If student was successful in assembling both Figure #1 and Figure #2 on the first attempt, present student with a drawing of Figure #3a (Exhibit 2: drawing without the lines drawn). Also present student with the pieces of Figure #3 and have him/her attempt to assemble the pieces so that the assembly looks like the model. If the student is unable to assemble Figure #3 in a reasonable amount of time present a picture of Figure #3 with the lines drawn. (Monitor student as he/she works, i.e., if student works slow but appears to make progress, let him/her continue to work. If, however, he/she is not making progress and/or appears to be getting frustrated, the task should be stopped.) Let student view this picture for five seconds, then remove from student's sight. Have student attempt to assemble the pieces into a completed whole to look like Figure #3.

2. Student will identify the two-dimensional representation of three-dimensional objects.

MATERIALS: See Exhibit 3 at the end of this section. The three-dimensional objects utilized for this task are taken from the game "Blockhead." This game can be purchased at toy stores, discount stores, etc..

The three-dimensional blocks to use for the items are as follows:

Item 1 - large round cylinder: C
Item 2 - square block: B
Item 3 - skinny round cylinder: A
Item 4 - polygon: D
Item 5 - long rectangle: B
Item 6 - rectangle with concave top: A (D is incorrect. Its sides are too narrow.)

Steps

1. Present student with a copy of Exhibit 3 (two pages, six items).

2. Inform student that he/she will be asked to identify the two-dimensional shape of an object that will be presented to him/her. Student will either mark an "X" over the figure selected or point to it.

   NOTE: Be sure that you do not "coach" student or give away the correct answer by voice inflection or other means.

3. Place the three-dimensional block in front of student. Allow him/her to pick it up to look at it. Instruct the student to determine which of the four two-dimensional figures in item 1 looks most nearly the same as the three-dimensional object. Have the student either point to the correct object or mark his/her selection with a pen or pencil on a copy of the items.

4. Repeat this procedure for the remaining items.

3. Student will recognize the relationship resulting from the movement of objects in space.

MATERIALS: See Exhibit 4 at the end of this section.

Steps

1. Present student with a copy of Exhibit 4 (three pages, six items).

2. Inform student that he/she will be asked to identify the figures (A, B, C, or D) that, when combined with the given figure, will look like completed figure shown.

3. Have student mark an "X" over the figure selected.

The correct answers are as follows:

Item 1 - A	Item 3 - D	Item 5 - C
Item 2 - B	Item 4 - B	Item 6 - A

P-Form Perception: Perceive pertinent detail in objects in pictorial or graphic material; make visual comparisons and discriminations and see slight differences.

Assessment Tasks

1. Student will compare two very similar drawings and find at least six differences between the two drawings.

   MATERIALS: See Exhibit 5 at the end of this section.

   Have student write down the answers on a sheet of paper or circle the difference on a copy of the drawings with a pen or pencil. This allows the teacher to maintain a record of student's performance.

   The differences between the two drawings are:

Drawing #1	Drawing #2
1. Message holder is missing	1. Creamer is missing
2. Man has stripes on tie	2. Lady on left has a ring
3. Man has moustache	3. Curtain is shorter
4. Pens in man's pocket	4. Lady has necklace
5. Name plate on desk	5. Fork instead of a spoon
6. Name tag on man's apron missing	6. Lady has no earring

2. Student will attempt to correctly match nuts to the proper sized bolts. It is very important to stress to student that he/she tries very hard to match the correct nut to the correct bolt on the first attempt.

   MATERIALS: 7/16", 1/2", 9/16", and 5/8" hex nuts, bolts that will fit each of the nuts. Available at local hardware store or possibly from the bus garage, shop class, or building maintenance.

   Steps
   1. Have student sit at a desk or table. Present four bolts of various sizes in front of student. Place them about four inches apart from the student's left to right. Mix up the order so that the bolts do not lay in serial order by size.

   2. Inform student that he/she will be presented one nut that will fit only one bolt. Again, stress that student make an effort to locate the correct bolt on the first attempt.

   3. Present student the nut and note if he/she was successful on the first attempt or how many attempts it did take him/her to locate the correct bolt. Do this with the remaining nuts.

Q-Clerical Perception: Perceive pertinent detail in written or tabular materials.

Assessment Tasks

1. Student will compare an incorrect copy of a paragraph to a correct copy and will identify the errors/differences between the two.

   MATERIALS: See Exhibit 6 at the end of this section.

   Steps
   1. Present to student a copy of the correct paragraph and a copy of the incorrect paragraph.

   2. Have student circle the differences/errors on the incorrect copy.

   3. Check student's responses against the answer key located in Exhibit 6.

2. Student will compare data from file cards to data on a sheet of paper noting any errors by correcting the file sheet.

   MATERIALS: See Exhibit 7 at the end of this section (copies of file cards, file sheet, score sheet file sheet with errors indicated). 3" x 5" index cards, transfer the information on the cards located in Exhibit 7 to 3" x 5" index cards.

   Steps
   1. Present to student the 15 cards.

   2. Present to student copy of the "File Sheet."

   3. Instruct student to compare the information on the index cards with the information on the file sheet. The information on the index cards is considered correct. If an error is discovered on the file sheet, that particular piece of information should be circled.

   4. Score student's responses by comparing his/her completed file sheet to the Score Sheet File Sheet.

K-Motor Coordination: Coordinate eyes and hands or fingers rapidly and accurately; make a movement response accurately and swiftly.

Assessment Tasks

1. Utilizing a copy of Exhibit 8, student will place a dot inside the squares with a felt tip pen.

   MATERIALS: See Exhibit 8 at the end of this section. Fine point felt tip pin.

   Steps
   1. Present student with a copy of Exhibit 8 (boxes with connecting arrows) and a felt tip pen.

   2. Instruct student to mark a dot in each box with the felt tip pen. Ensure that student starts in the appropriate box and follows the directions of the arrows until marking the last box.

   3. Instruct student to work as quickly as he/she can while not making marks outside of the boxes.

   4. Scoring: Observe student's eye-hand coordination as he/she is performing the task. Count total number of boxes skipped and/or boxes that have marks outside or extending outside their frames.

      NOTE: Observe and note student's work rate, i.e., is he/she slow, methodical, fast and accurate, fast and making errors, etc.

2. Student will cut out a geometric figure drawn on an 8 1/2" x 11" piece of paper.

   MATERIALS: See Exhibit 9 at the end of this section. Sharp scissors.

   Steps
   1. Present to student a copy of Exhibit 9 and a pair of scissors.

   2. Have student cut along all the lines so that the initial geometric figure is cut into six pieces. (Emphasize to student that it is important to cut within the lines.)

      Check the student's work for cuts made outside the darkened border.

      Note student's behavior, i.e., was he/she careful, careless, accurate, etc.

F-Finger Dexterity: Move the fingers and manipulate small objects with the fingers, rapidly or accurately.

Assessment Tasks

1. Student will assemble 15 bolts, nuts, and washers as quickly as he/she can.

   MATERIALS: 15 bolts--3/8" or smaller, threaded all the way to the bolt's head, 15 matching nuts, and 15 matching washers. These materials may be obtained from the building maintenance section, bus garage, industrial arts class, etc. or may be purchased at a hardware store.

   Steps
   1. Have student sit at a flat table or desk.

   2. Present to student a pile of bolts, a pile of washers, and a pile of nuts (three separate piles extending from the student's left to right) on the table in front of him/her.

   3. Instruct student to pick up one bolt, then one washer and place it over the bolt, then one nut and thread it onto the bolt as far as it will go.

      Observe student's ability to manipulate the objects in the picking up, placing, and twisting motions with the fingers.

2. Student will sort different objects by picking up the objects with his/her fingers and placing them into designated jars.

   MATERIALS: one square cake pan (or a similar container); five small glass jars labeled with: rubber bands, buttons, marbles, large paper clips, and small paper clips; 15 rubber bands of various sizes, preferably small; 15 buttons of various sizes; 15 marbles; 15 large paper clips; and 15 small paper clips.

   Steps
   1. Have student sit at flat table or desk.

   2. Place the container (cake pan) with the 75 items (rubber bands, buttons, marbles, large and small paper clips) in front of student.

   3. Place the five jars in front of the container so that the side with the label can easily be seen by student. (If student is unable to read the label, place one item belonging in the jar into the jar while explaining to student the nature of the task.)

   4. Have student pick up objects from the tray with one hand and place them into the appropriate jar. Observe student's ability to utilize his/her fingers in performing this task.

M-Manual Dexterity: Move the hands easily and skillfully; work with the hands in placing and turning motions.

Assessment Tasks

1. If student is enrolled in industrial arts, home economics, and/or fine arts class, interviewing the instructor(s) and/or observing student during these classes may yield information on the student's manual dexterity ability (i.e., ability to manipulate hand tools, cooking utensils, etc.).

2. Student will pour water from the pitcher into each jar until the jars are full. Student will then screw a lid on each jar until snug. Then student will place each jar into the cardboard box.

   MATERIALS: One quart or 1/2 gallon plastic/tupperware pitcher, eight jars (peanut butter size) with lids, and a cardboard box large enough to place the eight jars into.

   As student performs this task observe his/her ability to manipulate the pitcher while pouring water into the jars, ability to utilize twisting motions while screwing the lids onto the jars, and ability to grasp and place the jars into the cardboard box.

   NOTE: If the pitcher runs out of water, instruct student to refill it. If possible, observe student while he/she does this. Note the student's coordination and manipulation in filling the pitcher up from a faucet.

3. Student will fold, cut, collate, staple, and stack sheets of paper.

   MATERIALS: Sharp scissors, 10 sheets each of three different colors of construction or typing paper, and a stapler.

   Steps
   1. Have student sit at a large flat desk.

   2. In front of student arrange three stacks of 8 1/2" x 11" typing or construction paper. Each stack should be of a different color (white, pink, green, etc.). Have scissors and stapler located within student's reach on the table.

   3. Instruct student to begin with one stack, fold the paper in half, cut the paper along the crease to make two equal size pieces, and neatly stack these into a new pile. Continue this process until all three original stacks have been cut and there are three piles of paper half the original size.

4. Have student collate these three piles so that there are 20 sets of paper containing one of each color. Instruct student to staple each collated stack before collating the next stack. Place the stapled set to the side and neatly stack subsequent collated stacks onto this one.

   As student is performing this task observe his/her ability to manipulate the paper in making folding and stacking motions. Also observe his/her ability to coordinate the hands in cutting, stapling, collating, and stacking the paper.

C-Color Discrimination: Match or discriminate between colors; identify a particular color or color combination; perceive contrasting color combinations.

Assessment Tasks

1. Student will sort buttons or marbles into appropriate labeled jars according to color.

   MATERIALS: Buttons, marbles, or some small item that comes in various colors--15 items of each color, sizes should vary, should have several different colors: yellow, green, blue, purple, red, pink, white, black, brown).

   Steps
   1. Have student sit at a flat table or desk.

   2. Present student the pan with the assorted items (buttons, marbles, or etc.). Place the appropriate number of labeled jars in front of student so the label is facing student.

   3. Instruct student to sort the items by color and place the items into the jars with the corresponding color labels.

2. Student will arrange color swatches in a specific order by following a completed sample as a guide.

   MATERIALS: Various color swatches of cloth--six 3" x 5" pieces of each color. Material may be obtained from the home economics class.

   Obtain material of various colors so that each color piece can be cut to create six 3" x 5" pieces.

   After the material has been cut to form six 3" x 5" pieces of each color, gather one swatch from each color. Arrange these swatches to form a "sample set" that will be used as a guide for student to follow in his/her assemblies.

   The order of the swatches could be as follows: light yellow, medium yellow, dark yellow, light green, dark green, olive drab, pink, red, maroon, purple, brown, light brown, black, navy blue, royal blue, sky blue.

   After the swatches have been arranged to form the "sample set," staple one end so that the order remains intact.

On the reverse side of the color swatches (with the exception of the "sample set") it will be beneficial to code the swatches to make scoring easier. An effective method is to use a four letter code in which the second letters will spell a phrase. For example, using the 16 different colors presented above a four letter code is printed on the reverse side of each swatch. The same four letter code will be on all swatches of the same color (i.e., all light yellow swatches will have the same four letter code, all medium yellow swatches will have the same four letter code, etc.). A 16 letter code could be as follows:

HTRZ	UVAE
LHPL	GELR
ZEWA	CRNZ
BDNP	MYFT
EAYS	TCRD
RYRC	LOHG
WIOA	QLUK
SSPB	TDWM

Scoring is made easier by noting that the second letters spell, "The day is very cold." If this phrase is spelled, the student arranged the color swatches correctly.

Steps

1. Have student sit at a large flat table or desk.

2. Present student with a box full of the assorted color swatches, the completed sample set, and a stapler.

3. Instruct student to make replica sets of swatches by following the order of the sample set. Once student has completed a set, he/she is to staple the set so that the set stays together. (If stapler will not accommodate the size of a completed set of swatches, supply student with rubber bands to put around completed sets.) The task is completed when student has completed all five sets or reports being finished.

Exhibit 1

ACCESS SKILLS Generic Aptitude
Informal Assessment Checklist

Student Name _____ Date _____

Age _____ Grade _____

This checklist was developed to assist the teacher in recording students performance on each of the ACCESS SKILLS aptitude measures.

Spatial Assessment Tasks

1. Student will assemble geometric shapes into a whole.

Steps	Correct	Incorrect
1. Present the five cut up pieces of Figure #1 and instruct student to assemble them into a square.	_____	_____
If student has difficulty, show him/her a picture of an assembled square with the lines drawn. Show this picture for five seconds and then have student again attempt to assemble the square.	_____	_____
2. If student was successful on the <u>first</u> attempt with Figure #1, remove the assembled pieces of Figure #1 and present him/her with the assorted pieces of Figure #2. Instruct student to assemble these pieces into a square.	_____	_____
If student is having difficulty assembling Figure #2, present him/her with a picture of the assembled square with the lines drawn. Show this picture for five seconds and then remove it from student's sight. Have student again attempt to assemble the square.	_____	_____

	Correct	Incorrect
*If student was unsuccessful on the first attempt of assembling Figure #1, but was successful in his/her second attempt after viewing the completed assembly, follow this procedure: Show the picture of Figure #2 completely assembled for five seconds. Then remove this picture and have the student attempt to assemble the pieces into a square.	_____	_____
3. If student was successful in assembling both Figure #1 and Figure #2 on the first attempt, present student with a drawing of Figure #3a. Also present student with the pieces of Figure #3 and have him/her attempt to assemble the pieces so that the assembly looks like the model.	_____	_____
If the student is unable to assemble Figure #3 in a reasonable amount of time, present a picture of Figure #3 with the lines drawn. Let student view this picture for five seconds, then remove from student's sight. Have student attempt to assemble the pieces into a completed whole to look like Figure #3.	_____	_____

2. Student will identify the two-dimensional representation of three-dimensional objects.

Steps

- Refer to manual	Correct	Incorrect
Item 1	_____	_____
Item 2	_____	_____
Item 3	_____	_____
Item 4	_____	_____
Item 5	_____	_____
Item 6	_____	_____

3. Student will recognize the relationship resulting from the movement of objects in space.

Steps

- Refer to manual

	Correct	Incorrect
Item 1	_____	_____
Item 2	_____	_____
Item 3	_____	_____
Item 4	_____	_____
Item 5	_____	_____
Item 6	_____	_____

Form Perception Assessment Tasks

1. Student will compare two very similar drawings and find at least six differences between the two drawings.

   Steps

   - Refer to manual

		Correct	Incorrect
Drawing #1: _____	of 6 different found	_____	_____
Drawing #2: _____	of 6 different found	_____	_____

2. Student will attempt to correctly match nuts to the proper sized bolts. It is very important to stress to student that he/she tries very hard to match the correct nut to the correct bolt on the first attempt.

   Steps

   - Refer to manual

		Correct	Incorrect
$\frac{7}{16}$"	nut	_____	_____
$\frac{1}{2}$"	nut	_____	_____
$\frac{9}{16}$"	nut	_____	_____
$\frac{5}{8}$"	nut	_____	_____

Clerical Perception Assessment Tasks

1. Student will compare an incorrect copy of a paragraph to a correct copy and will identify the errors/differences between the two.

Steps

- Refer to manual	Correct	Incorrect
If student locates all errors/differences on each picture, place a checkmark in the "Correct" column. Record the number of errors/ommissions student made in the "Incorrect" column.	_____	_____

2. Student will compare data from file cards to data on a sheet of paper noting any errors by correcting the file sheet.

Steps

- Refer to manual	Correct	Incorrect
If student locates all errors place a checkmark in the "Correct" column. Record the number of overlooked errors/non-existent errors marked by the student in the "Incorrect" column.	_____	_____

Motor Coordination Assessment Tasks

1. Utilizing a copy of Exhibit 8, student will place a dot inside the squares with a felt tip pen.

Steps

- Refer to manual

Scoring involves observing student's eye-hand coordination as he/she is perfoming the task. Note student's work rate, i.e. is he/she slow, methodical, fast and accurate, fast but with errors, etc.
Count the total number of errors and subtract this number from 106 (total number of boxes) and record the difference in the space provided.
Errors refer to the total number of boxes skipped and/or boxes that have marks outside or extending outside their frames.

Number correct _____

Observations:

2. Student will cut out a geometric figure drawn on an 8 1/2" x 11" piece of paper.

Steps

- Refer to manual

Scoring involves checking student's work for cuts made outside the darkened border. Count the number of cuts made outside the dardened border. Record this number in the space provided. Also note and record student's behavior, i.e. was he/she careful, careless, accurate, etc.

Number of errors _____

Observations:

Finger Dexterity Assessment Tasks

1. Student will assemble 15 bolts, nuts, and washers as quickly as he/she can.

   Steps

   - Refer to manual

   Scoring involves observing the student's ability to manipulate the objects in the picking up, placing, and twisting motions with the fingers.

   Observations:

2. Student will sort different objects by picking up the objects with his/her fingers and placing them into designated jars.

   Steps

   - Refer to manual

   Scoring involves observing student's ability to pinch, pick up, and place objects in appropriate jars. The emphasis is on finger dexterity ability, not the ability to follow directions. If the student fails to comprehend the verbal and/or demonstrated instructions, note this in the "observations" section below.

   Observations:

Manual Dexterity Assessment Tasks

1. If student is enrolled in industrial arts, home economics, and/or fine arts class, interviewing the instuctor(s) and/or observing student during these classes may yield information on the student's manual dexterity ability (i.e., ability to manipulate hand tools, cooking utensils, etc.).

   Comments: (Use this space to summarize interviews and/or classroom observations made)

2. Student will pour water from the pitcher into each jar until the jars are full. Student will then screw a lid on each jar until snug. Then student will place each jar into the cardboard box.

   Steps

   - Refer to manual

   Scoring involves observing student's ability to manipulate the pitcher while puring water into the jars, ability to utilize twisting motions while screwing the lids onto the jars, and ability to grasp and place the jars into the cardboard box.

   Observations:

3. Student will fold, cut, collate, staple, and stack sheets of paper.

Steps

- Refer to manual

Scoring involves observing student's ability to manipulate the paper in making, folding and stacking motions, and the ability to skillfully coordinate the hands in cutting, stapling, collating, and stacking the paper.

Observations:

Color Discrimination Assessment Tasks

1. Student will sort buttons or marbles into appropriate labeled jars according to color.

   Steps

   - Refer to manual

   Scoring involves counting the number of items incorrectly placed in a jar. If all items are correctly placed, record a checkmark in the "Correct" column. Record the number of incorrectly placed items in the "Incorrect" column.

Correct	Incorrect
_____	_____

2. Student will arrange color swatches in a specific order by following a completed sample as a guide.

   Steps

   - Refer to manual

   Scoring consists of checking the 4-lettered code to determine if the phrase is spelled correctly If the phrase is correctly spelled, place a checkmark in the "Correct" column. If the phrase is incorrectly spelled, count the number of misplaced swatches and record this number in the "Incorrect" column. Score each set separately.

	Correct	Incorrect
Set 1	_____	_____
Set 2	_____	_____
Set 3	_____	_____
Set 4	_____	_____
Set 5	_____	_____

Exhibit 2

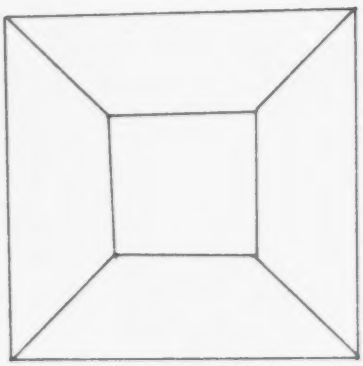


Figure 1

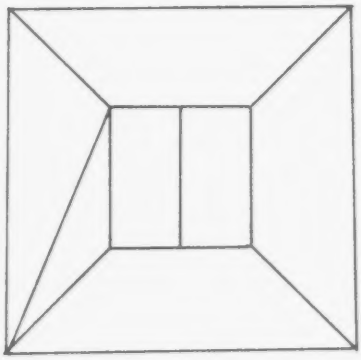


Figure 2

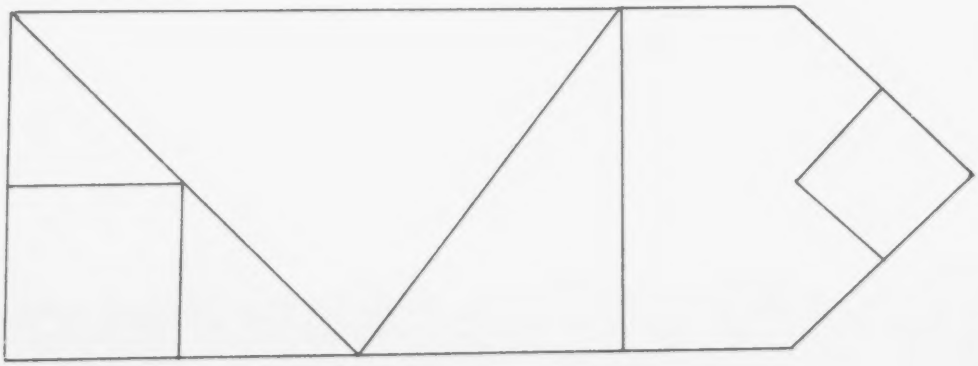


Figure 3

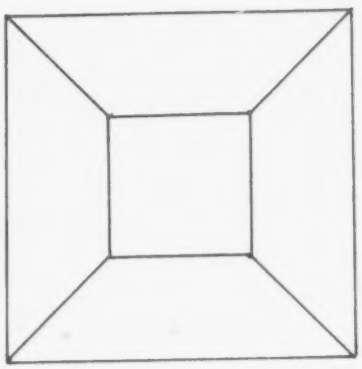


Figure 1a

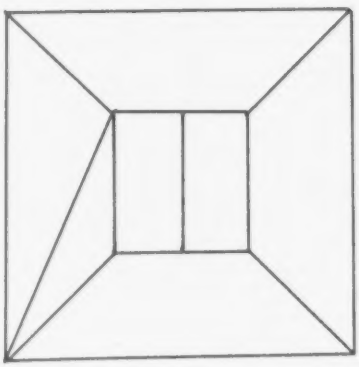


Figure 2a

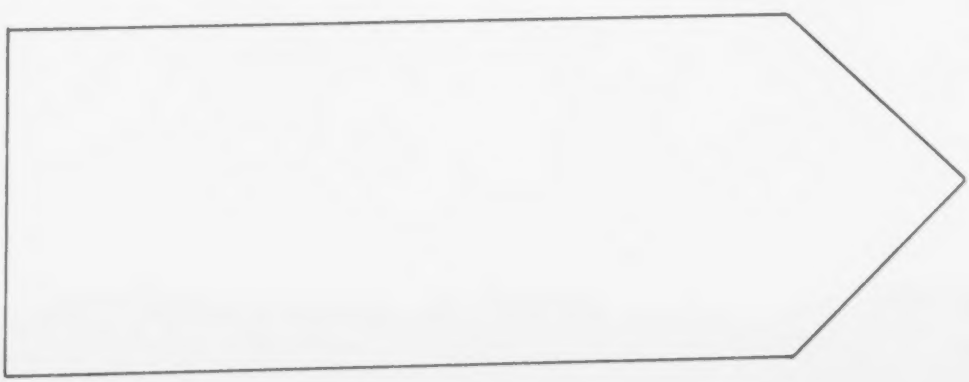


Figure 3a

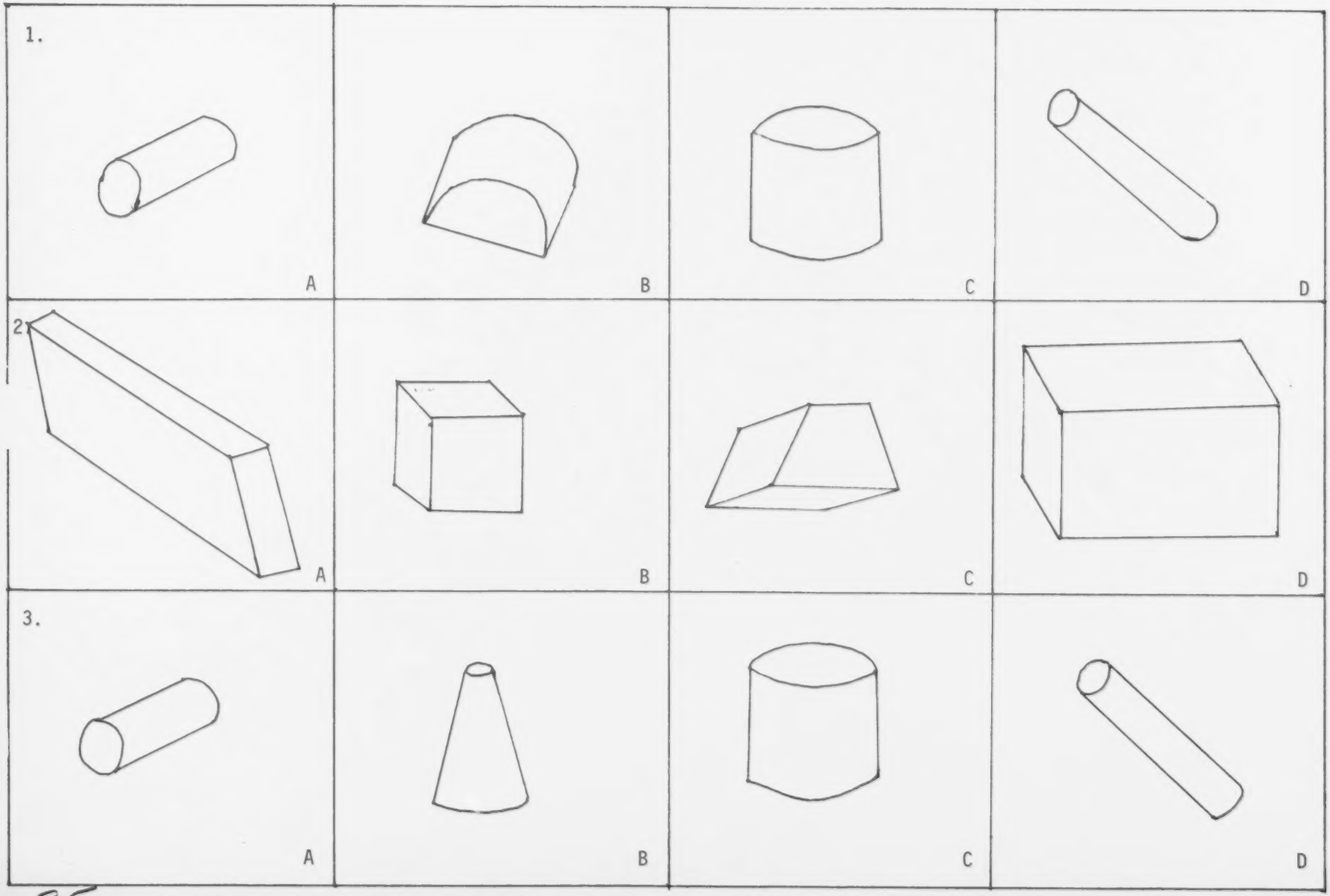
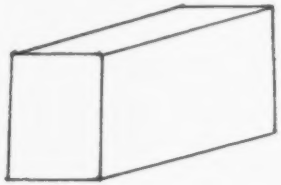
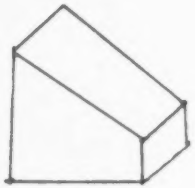


Exhibit 3

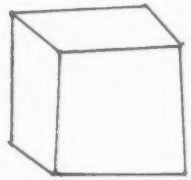
4.



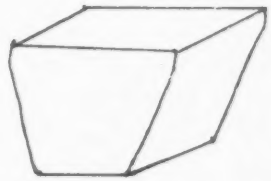
A



B

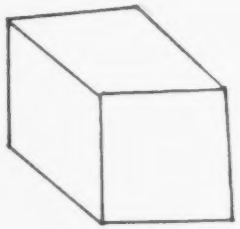


C

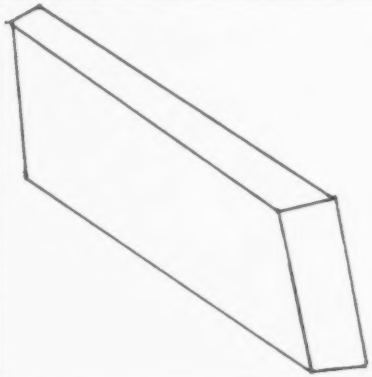


D

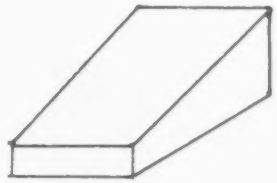
5.



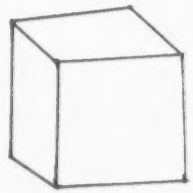
A



B

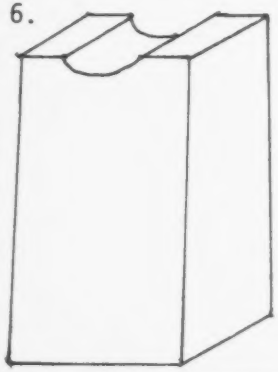


C

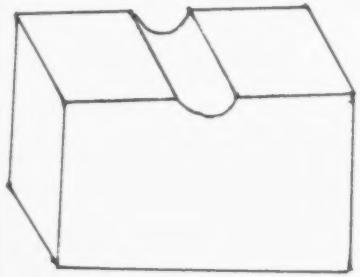


D

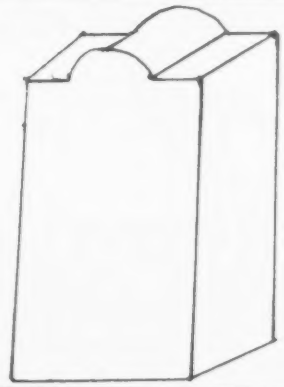
6.



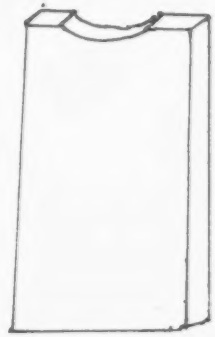
A



B

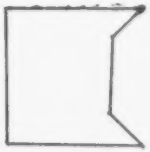


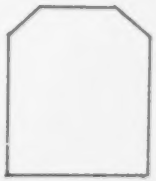
C



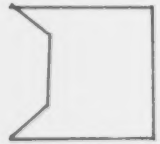
D

1. Which of the four figures, A, B, C, or D, when combined with Figure #1, will look exactly like the rectangle shown:


#1

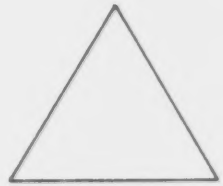

A

B


C

D

2. Which of the four figures, A, B, C, or D, when combined with Figure #2, will look exactly like the triangle shown:



#2

A

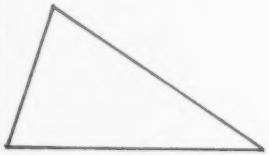
B

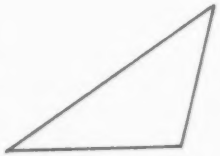
C

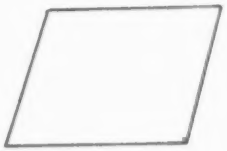
D

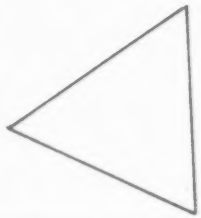
Exhibit 4

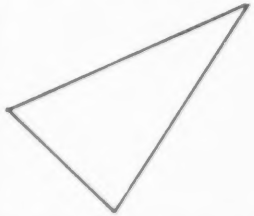
3. Which of the four figures, A, B, C, or D, when combined with Figure #3, will look exactly like the parallelogram shown:


#3

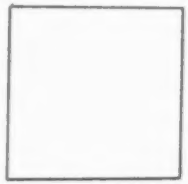

A


B


C


D

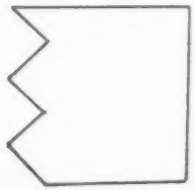
4. Which of the four figures, A, B, C, or D, when combined with Figure #4, will look exactly like the square shown:



#4

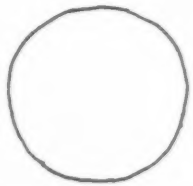
A

B


C

D

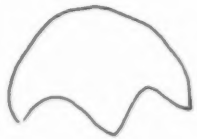
5. Which of the four figures, A, B, C, or D, when combined with Figure #5, will look exactly like the circle shown:



#5

A

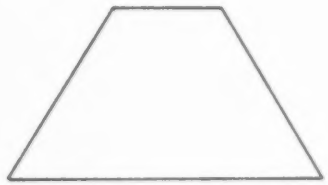
B



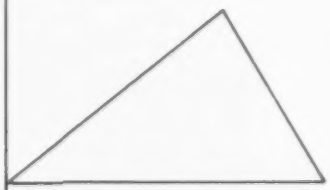
C

D

6. Which of the four figures, A, B, C, or D, when combined with Figure #6, will look exactly like the quadrilateral shown:



#6



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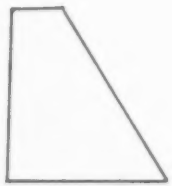

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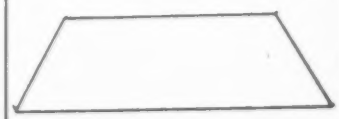
C



D

Exhibit 5

Exhibit 6

Correct Copy

The Plains Indians' solution to such fundamental human needs as food, shelter and social order reveal them as a people of resourcefulness and ingenuity--qualities most visibly proclaimed by their dwellings. The tipi was perfectly fitted to the housing requirements of the roving buffalo hunters. This buffalo-skin tent was portable, easily erected, waterproof and, owing to a clever wind-deflecting device of smoke flaps, well ventilated even with a fire burning inside.

Although the tipi has come to be a symbol of Plains Indian life, many tribes spent a great deal of the year, when they were not on the move, in permanent structures of earth or grass. But none of the Plains Indians' dwellings could match those of the Pueblos, their southwestern neighbors, who resided in terraced apartment buildings where one man's roof was another man's balcony.

Incorrect Copy

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where one man's roof was another man's balcony.

Exhibit 7

File Sheet

	Name	Age	Sex	Address	Phone Number
1.	Langley, Melissa	39	F	P.O. Box 1413 Brattleboro, Vermont 05301	(802) 272-6717
2.	White, Jack	43	M	P.O. Box 780 Buffalo, New York 14240	(716) 243-0040
3.	Sabo, Barry	22	M	140 West Ash Unity, Maine 04988	(207) 387-1199
4.	Alvarez, Albert	52	M	1775 Kings Street Gainesville, Texas 76240	(512) 319-2817
5.	Nicholson, Vera	32	F	301 Bell Drive, Apt. D2 Quincy, Illinois 62301	(309) 481-9230
6.	Doerter, Chris	24	M	P.O. Box 2108 Oakland, California 94621	(415) 617-6598
7.	Whitson, Jane	30	F	East Coral Drive Palm Harbor, Florida 33563	(305) 676-1818
8.	Kingston, Nathan	46	M	P.O. Box 1990 Chicago, Illinois 60690	(312) 232-8430
9.	Jennings, Stephen	65	M	2456 Holly Street Dodge City, Kansas 67801	(913) 874-1249
10.	Grabowski, Penny	22	F	6300 Abington Avenue Detroit, Michigan 48228	(313) 762-6700
11.	Langston, Melissa	44	F	Rural Route 3 Cache Junction, Utah 84304	(801) 424-0784
12.	Dougherty, Chris	25	M	P.O. Box 16780 Baton Rouge, Louisiana 70803	(504) 941-2727
13.	Mason, Ginger	34	F	Box 2, Rural Route 4 Canton, Ohio 44730	(216) 555-1547
14.	Winters, Delores	57	F	16 Rockridge Road Atlanta, Georgia 30329	(404) 247-6028
15.	Young, Lori	23	F	P.O. Box 120 Cutlar, Indiana 46920	(219) 830-6412

Index Cards

Name: Melissa Langley

Age: 39

Sex: F

Address: P.O. Box 1431
Brattleboro, Vermont 05301

Phone Number: (802) 272-6717

Name: Chris Doerter

Age: 24

Sex: F

Address: P.O. Box 2108
Oakland, California 94621

Phone Number: (415) 617-6598

Name: Jack White

Age: 43

Sex: M

Address: P.O. Box 780
Buffalo, New York 14240

Phone Number: (716) 243-0044

Name: Jane Whitson

Age: 30

Sex: F

Address: East Coral Drive
Palm Harbor, Florida 33563

Phone: (305) 676-1818

Name: Barry Szaabo

Age: 22

Sex: M

Address: 140 West Ash
Unity, Maine 04988

Phone Number: (207) 387-1199

Name: Nathan Kingston

Age: 46

Sex: M

Address: P.O. Box 1990
Chicago, Illinois 60690

Phone Number: (312) 232-8430

Name: Albert Alvarez

Age: 52

Sex: M

Address: 1775 King Street
Gainesville, Texas 76240

Phone Number: (512) 319-2811

Name: Steven Jennings

Age: 65

Sex: M

Address: 2456 Holly Street
Dodge City, Kansas 67801

Phone Number: (913) 874-1249

Name: Vera Nicholson

Age: 32

Sex: F

Address: 301 Bell Drive, Apt. D2
Quincy, Illinois 62301

Phone Number: (309) 481-9230

Name: Penny Grabowski

Age: 22

Sex: F

Address: 6300 Abington Avenue
Detroit, Michigan 48228

Phone Number: (313) 762-6700

Name: Melissa Langston

Age: 44

Sex: F

Address: Rural Route 3
Cache Junction, Utah 84304

Phone Number: (801) 424-0784

Name: Kris Dougherty

Age: 25

Sex: M

Address: P.O. Box 16780
Baton Rouge, Louisiana 70803

Phone Number: (504) 941-2727

Name: Ginger Mason

Age: 34

Sex: F

Address: Box 2, Rural Route 4
Canton, Ohio 44730

Phone Number: (216) 555-1549

Name: Delores Winters

Age: 57

Sex: F

Address: 16 Rockridge Road
Atlanta, Georgia 30329

Phone Number: (404) 247-6028

Name: Lori Young

Age: 23

Sex: F

Address: P.O. Box 120
Cutler, Indiana 46920

Phone Number: (219) 830-6412

File Sheet

Score Sheet

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Exhibit 8

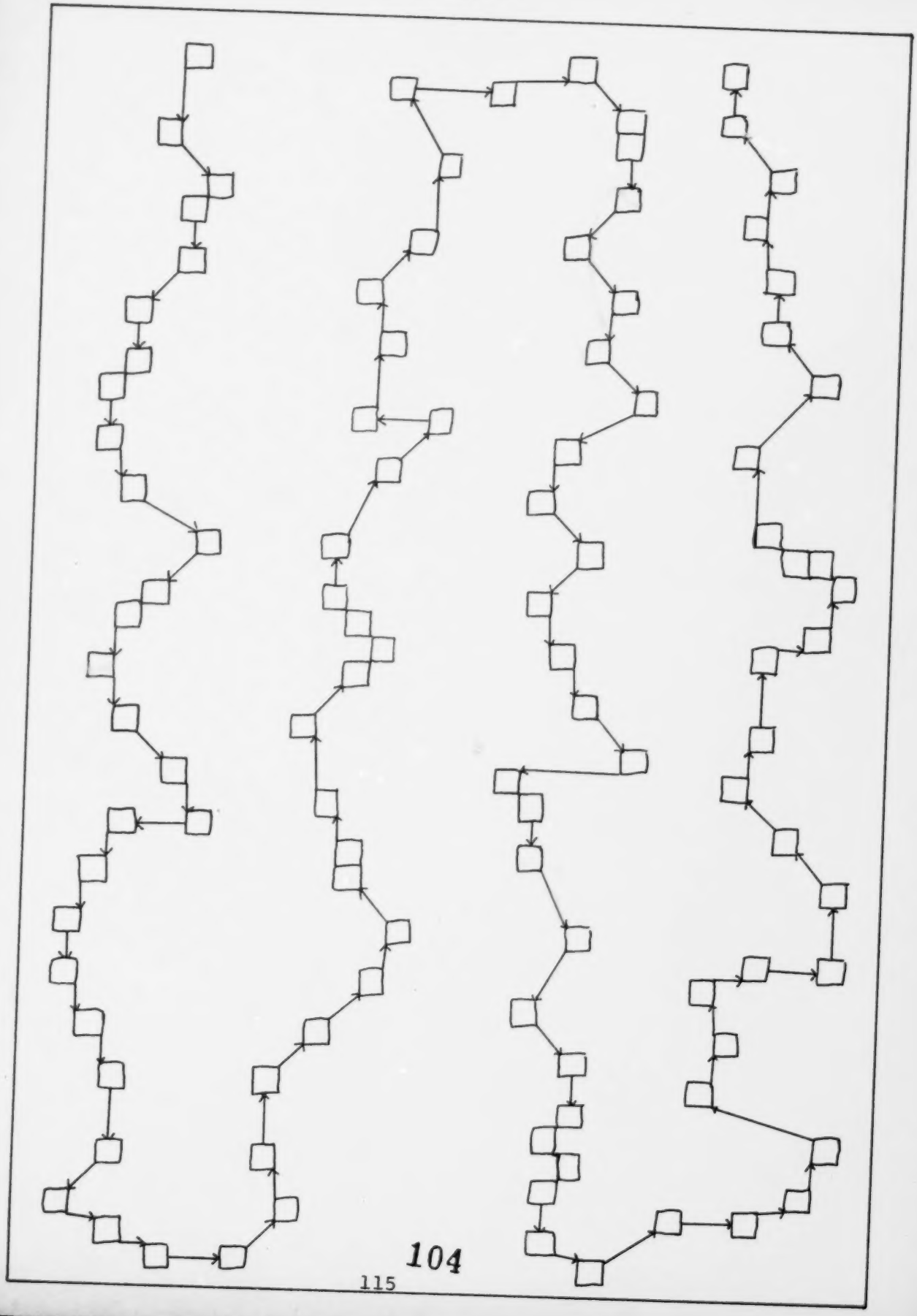
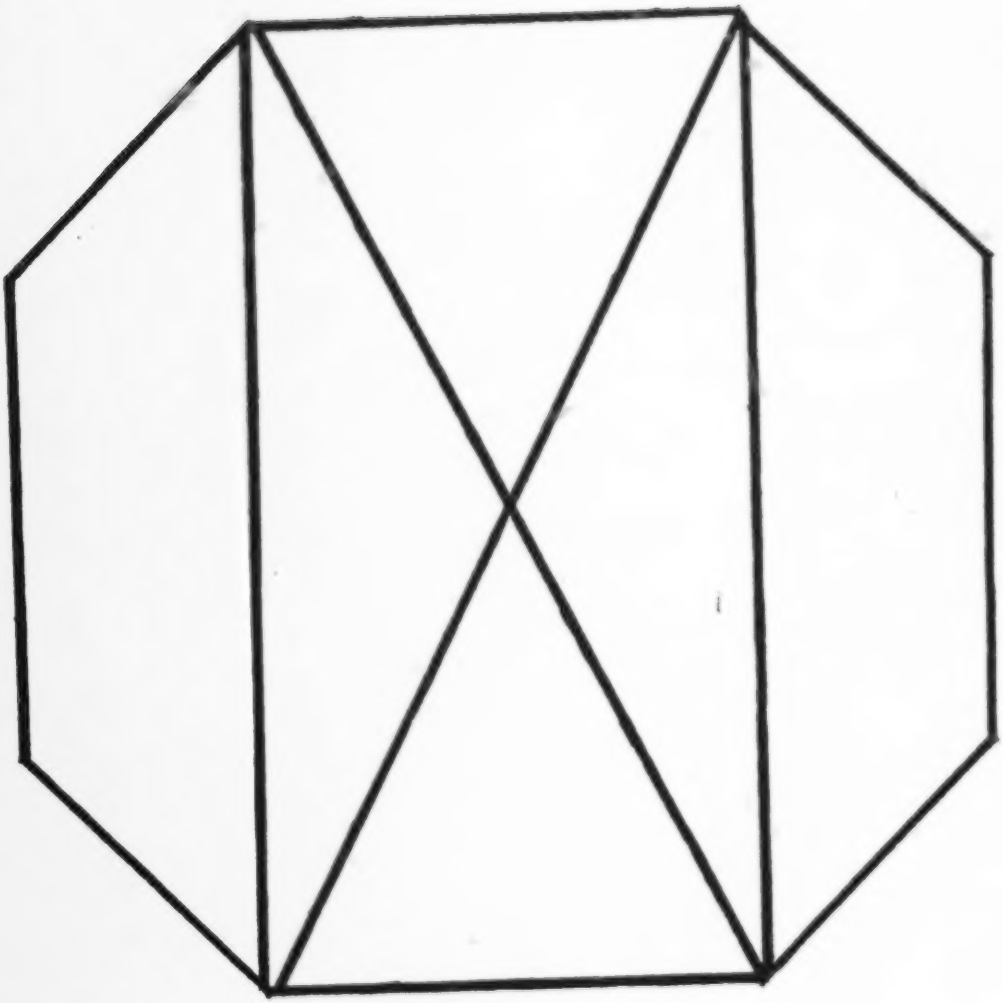


Exhibit 9



TEMPERAMENT

Temperaments, as defined by the Department of Labor, are those adaptability requirements made on the worker by the job-worker situations. There are many factors that contribute to job success. Besides having the training and skills for a particular job, a person's "personal characteristics" in relation to a job's temperamental requirements is one critical factor.

Not everyone shares the same ability to adapt to the temperamental requirements of a job. Two people with the same skills training, with relatively the same degree of training success, may perform on the job considerably different due to individual temperamental differences. It is therefore important when planning a student's vocational future to learn about his or her personal characteristics as they relate to vocational temperaments.

Assessing a student's temperaments is not a one time activity. Observing a student's behavior across time and within various situations can provide substantial information about a student's temperaments. It is essential for the person conducting the assessment to become fully aware of the definitions of each temperament and to recognize the relationship between the temperaments and the student's behavior. Definitions of the eight vocational temperaments associated with ACCESS SKILLS: Vocational Readiness Skills Inventory series are included in the section (see Exhibit 1). Further information can be found in the Department of Labor's Handbook for Analyzing Jobs, and can be obtained from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Interviewing the student is another useful means to informally assess vocational temperaments. Prior to interviewing the student, it will be beneficial to administer to the student the Vocational Temperament Rating Scale (see Exhibit 2 in this section). This scale consists of 32 statements that relate to the eight vocational temperaments. Also included in Exhibit 2 is the Vocational Temperament Questionnaire Score Sheet. This score sheet allows for indentifying clues as to the strongest temperaments of the student.

To determine the student's score on the Vocational Temperament Rating Scale, record on the Score Sheet beside the item number the numerical value of the student's response to the Rating Scale. Then, for each Temperament type, total the numerical values and record this number in the blank marked Total. Multiply this sum by two and record the product in the space provided. Refer to the scale at the bottom of the Vocational Temperament Rating Scale Score Sheet to determine the student's strongest vocationally related temperament(s).

After the student has completed the Vocational Temperament Rating Scale and the results have been reviewed, discuss this information with him or her. Explain fully to the student what his or her strongest temperament indicators are, and share with him or her some occupations requiring these temperaments. Determine if the student agrees or disagrees with the results, and discuss as to why or why not.

The Vocational Temperament Record Form (see Exhibit 3) is provided for recording the student's "strongest" and "mild" temperament indicators. There is space available to record notes based on the discussion with the student concerning his or her rating scale results.

Exhibit 1

DESCRIPTION OF THE EIGHT VOCATIONAL TEMPERAMENT FACTORS

INFLUENCING

Adaptability to influencing people in their opinions, attitudes or judgments about ideas or things.

This factor is involved when the job requires the worker to motivate, convince or negotiate.

Job examples: sales representative; lobbyist; public relations representative; advertisement and marketing specialist.

SENSORY/JUDGMENTAL

Adaptability to making generalizations, evaluations or decisions based on sensory or judgmental criteria.

This factor is involved when the job requires the worker to rely on one or more of the five physical senses; or relies on knowledge gained by experience to made evaluations.

Job examples: illustrator; electronic mechanic; machinist.

DEAL with PEOPLE

Adaptability to deal with people beyond giving and receiving instructions.

This factor is involved when the job requires the worker to relate to people in situations involving more than giving or receiving instructions.

Job examples: sales representative; florist; receptionist; nurse's aide; child day care center worker.

REPETITION

Adaptability to perform repetitive work, or to continuously perform the same work, according to set procedures, sequence or pace.

This factor is involved when the job requires the worker to perform according to a routine, or set sequence, and there is an absence of diversion or room for independent judgment.

Job examples: bookkeeper; computer operator; sewing machine operator; kitchen helper; janitor; welding technician.

MEASURABLE/VERIFIABLE

Adaptability to making generalizations, judgments or decisions based on measurable or verifiable criteria.

This factor is involved when the job requires the worker to make evaluations on the basis of data.

Job examples: print shop helper; refrigeration mechanic; drafter; construction worker; automobile mechanic.

STRESS

Adaptability to perform under stress when confronted with emergency, critical, unusual or dangerous situations; or in situations in which working speed and sustained attention make or break aspects of the job.

This factor is involved when the job requires the worker to be subject to danger or risk to a significant degree, or to stress as a regular, consistent part of the job.

Job examples: hospital orderly; physical therapy assistant and home attendant; highway patrol person; firefighter.

PRECISION

Adaptability to situations requiring the precise attainment of set limits, tolerances or standards.

This factor is involved when the job requires the worker to be precise, thorough, exacting or meticulous in regard to material worked; or in activities such as numerical determination, record preparation or inspecting.

Job examples: payroll clerk; cook helper; auto body repairer; bricklayer helper; drafter; welding technician.

VARIETY/CHANGE

Adaptability to perform a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure.

This factor is involved when the job requires the worker to perform several duties that involve significant differences in technologies, techniques, and procedures, environmental factors, and physical demands or work situations.

Job examples: farm worker; home attendant; auto body repairer; auto service stations attendant; housekeeper; diesel mechanic apprentice.

Exhibit 2

VOCATIONAL TEMPERAMENT RATING SCALE

Student Name _____ Date _____

Age _____ Grade _____

Instructions: After reading the statement, place a checkmark in the space that best describes how you feel about it.

	Most Like Me			Least Like Me
	4	3	2	1
1. I like to promote and explain my ideas to people.	___	___	___	___
2. I like to use my knowledge gained through personal experience to make decisions.	___	___	___	___
3. I like to help other people.	___	___	___	___
4. I like jobs that stay the same over along period of time.	___	___	___	___
5. I like to make decisions based on facts rather than using my own intuition	___	___	___	___
6. I like to work where I have to finish by a certain time.	___	___	___	___
7. I like work that must be performed carefully.	___	___	___	___
8. I like job tasks that change often.	___	___	___	___
9. I like to change what other people think about something.	___	___	___	___
10. I like to judge the quality of an item/product by using one or all of my senses.	___	___	___	___
11. I like to work with a group of people.	___	___	___	___
12. I like tasks that are routine with little change.	___	___	___	___
13. I would like job tasks that involve inspecting, examining and testing products according to measurable standards.	___	___	___	___
14. I would like to work in emergency situations.	___	___	___	___
15. I like to perform work that must be correct.	___	___	___	___

		Most Like Me			Least Like Me
		4	3	2	1
16.	I would like a job that involves performing a variety of duties, often changing from one task to another.	___	___	___	___
17.	I would like for my work to influence people's beliefs.	___	___	___	___
18.	I would like a job where I could catch mistakes by looking things over.	___	___	___	___
19.	I like to meet and talk with new people.	___	___	___	___
20.	I like doing things according to set procedures.	___	___	___	___
21.	I would like to work in a job that requires gathering accurate information.	___	___	___	___
22.	I like jobs where I have to work fast.	___	___	___	___
23.	I like my work to be thorough and detailed.	___	___	___	___
24.	I would like a job that allows me to move around, travel, and do different tasks.	___	___	___	___
25.	I like to convince people of the importance of the values and opinions I believe in.	___	___	___	___
26.	I like to use my sense of touch to make decisions about the quality of items.	___	___	___	___
27.	I would like a job that involves assisting people with their needs.	___	___	___	___
28.	I like jobs that always require the same work everyday so I always know what I am expected to do.	___	___	___	___
29.	I like job duties that require precise measurements and observations.	___	___	___	___
30.	I like jobs that require risks and some danger.	___	___	___	___
31.	I would like to follow precise standards in work situations.	___	___	___	___
32.	I would like a job that involves constant change and flexibility.	___	___	___	___

VOCATIONAL TEMPERAMENT RATING SCALE

Score Sheet

INFLUENCING	SENSORY/JUDGMENTAL	DEAL with PEOPLE
1 - _____	2 - _____	3 - _____
9 - _____	10 - _____	11 - _____
17 - _____	18 - _____	19 - _____
25 - _____	26 - _____	27 - _____
Total _____ x 2 = _____	Total _____ x 2 = _____	Total _____ x 2 = _____

REPETITION	MEASURABLE/VERIFIABLE	STRESS
4 - _____	5 - _____	6 - _____
12 - _____	13 - _____	14 - _____
20 - _____	21 - _____	22 - _____
28 - _____	29 - _____	30 - _____
Total _____ x 2 = _____	Total _____ x 2 = _____	Total _____ x 2 = _____

PRECISION	VARIETY/CHANGE
7 - _____	8 - _____
15 - _____	16 - _____
23 - _____	24 - _____
31 - _____	32 - _____
Total _____ x 2 = _____	Total _____ x 2 = _____

Score: 24 - 32 = Strong Indicator of Temperament
16 - 23 = Mild Indicator of Temperament
4 - 15 = Negligible

Exhibit 3

VOCATIONAL TEMPERAMENT RECORD FORM

Student Name _____ Date _____

Age _____ Grade _____

Strong Indicators (24 - 32 pts.): _____

_____

_____

Mild Indicators (16 - 23 pts.): _____

_____

_____

Notes:

BASIC SAFETY CONCEPTS

Safety is of primary concern to both teachers and administrators of vocational education, as well as future employers. Awareness of safety practices and procedures can help prevent accidents in the classroom and on the job. This section assesses the student's awareness of basic safety concepts.

Assessment Tasks

1. The student will view sets of illustrations depicting safe and unsafe situations. He/she will distinguish between safe and unsafe situations.

   Steps

   1. Have the student sit at a flat table or desk and present to the student the illustrations depicting safe and unsafe situations (see Exhibit 1).

   2. Instruct the student to identify which illustration, A or B, or neither, is the unsafe situation.

   3. Record the student's choice on the Teacher Record Sheet (see Exhibit 2).

   4. After the student has chosen a particular illustration, ask the student to explain why the chosen illustration is unsafe. Record his/her explanation in the space provided on the Teacher Record Sheet. Compare the student's explanation to the key provided on the Teacher Record Sheet.

2. The student will complete a True and False test relating to basic safety concepts (see Exhibit 3).

   Steps

   1. Present to the student the Safety True and False test.

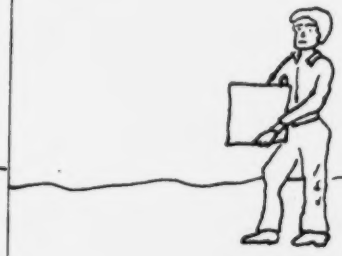
   2. Instruct the student to complete the test. Be available to answer and clarify questions the student may have. If the student has difficulty reading, read the statements to him/her.

   3. After the student has completed the True and False test, check his/her responses against the answer key (Exhibit 4). If he/she misses any, note that item for future instructional purposes.

Exhibit 1

#1

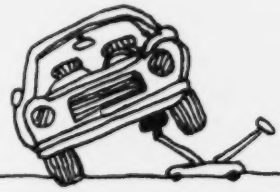
A



B

#2

A



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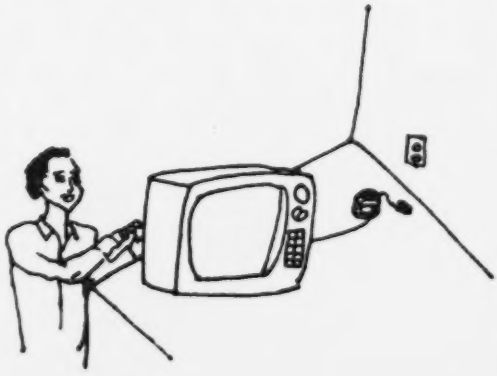
#3



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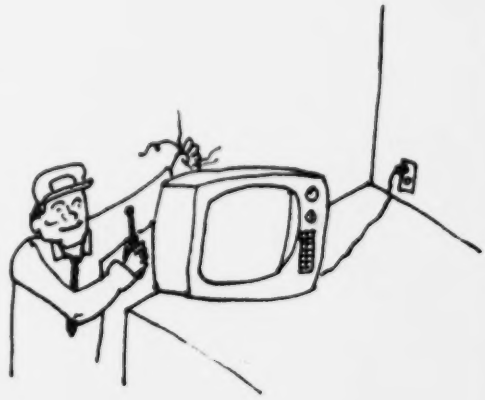


B

#4

A

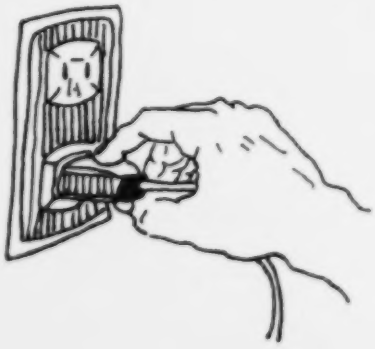
B

#5

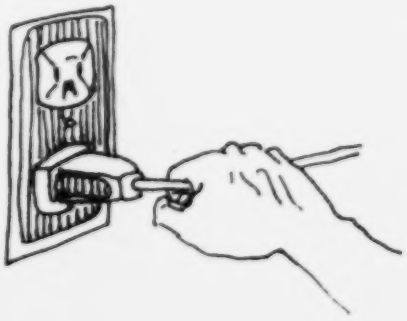
A

B

#6



A



B

#7

A

B

#8

A

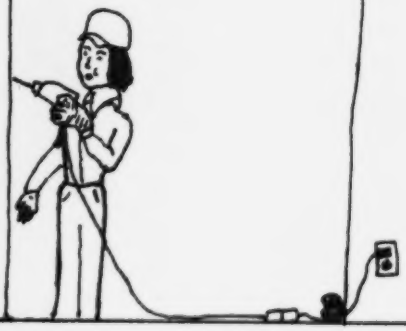
B

#9

A

B

#10



A

B

#11

A

B

#12

A

B

Exhibit 2

Teacher Record Sheet

Student Name _____ Date _____

Age _____ Grade _____ Teacher _____

Safe/Unsafe Illustrations

Directions: Circle the letter, A or B, of the student's choice for the unsafe illustration. Inquire of the student the reason(s) he/she feels the chosen illustration is unsafe. Record the student's explanation in the space provided and compare it to the answer(s) provided. After the student has completed this exercise, note the unsafe illustrations, if any, that the student did not correctly identify for future instructional reference.

Items

1. A B Neither

The unsafe illustration is A: The person is carrying the boxes in an unsafe manner. The boxes block his vision and he cannot see where he is walking.

Student Response:

2. A B Neither

The unsafe illustration is B: The car's center of gravity is not stable. It can easily be tipped over and thus is a safety hazard.

Student Response:

3. A B Neither

The unsafe illustration is B: The television the person is working on is plugged into an electrical outlet. This is a safety hazard due to the great risk of electrical shock.

Student Response:

4. A B Neither

The unsafe illustration is A: The person is leaning away from the ladder's center of gravity. This is a safety hazard because the person can easily lose his balance and fall.

Student Response:

5. A B Neither

The unsafe illustration is A: This person is using his back muscles to lift the box. This is a hazardous method of lifting because it can cause serious injury to the back.

Student Response:

6. A B Neither

The unsafe illustration is B: Never pull a plug from an electrical outlet by the cord. This can separate the insulation from the wire thus causing an electrical shock hazard.

Student Response:

7. A B Neither

The unsafe illustration is A: Boxes should never be used as a ladder. This depiction is further hazardous by the unevenness of the stacked boxes.

Student Response:

8. A B Neither

The unsafe illustration is A: The person is cutting the celery toward him. This is unsafe because the pressure applied to the knife causes the blade to move into him.

Student Response:

9. A B Neither

The unsafe illustration is B: The pot is on a heated burner on a stove. The pot's handle is unsafely situated because it can easily be bumped, thus spilling the heated contents causing a burn hazard.

Student Response:

10. A B Neither

The unsafe illustration is B: The electrical outlet is overloaded with too many cords. This is an electric shock and fire hazard.

Student's Response:

11. A B Neither

The unsafe illustration is A: The person is using his back muscles to turn and place the box on the counter. This is unsafe due to the potential damage to the back muscles and spine. This procedure should be accomplished by turning the body around as illustrated in B.

Student Response:

12. A B Neither

The unsafe illustration is B: It is important to wear safety gear at all times when operating power tools. By not wearing safety glasses in illustration B, this person risks getting particles in her eyes. This can cause permanent injury. This scenario is further hazardous by the created risk of dropping a power tool.

Student Response:

Exhibit 3

SAFETY

This is an exercise to determine your understanding of basic safety concepts. After reading each statement, if you believe it is true, circle the letter "T". If you think the statement is false, circle the letter "F". If you do not understand a particular statement, ask your teacher for assistance.

Circle

T F 1. Accidents can occur because you lack knowledge of tools, equipment or materials you use on the job.

T F 2. Your work habits and attitudes have an effect on the number of accidents that can occur on the job.

T F 3. Environmental hazards are things around you that might be dangerous.

T F 4. Being tired causes accidents by slowing down your reactions and making you less alert.

T F 5. You should not use electric tools in wet or damp places.

T F 6. It is okay to use any tools and equipment that are handy.

T F 7. You should always wear safety goggles when working with power equipment, batteries, or other equipment that could injure your eyes.

T F 8. It is not safe to wear loose clothing while you are working on moving machinery.

T F 9. Horseplay or running at work can be fun and safe.

T F 10. It is a good work habit to wipe spilled water from the floor.

T F 11. Do not ask other people for help if you have to lift a heavy object and they are busy.

T F 12. When handing a sharp pointed item to another person, always point the handle toward that person.

T F 13. You work better and safer if you use the right tool for the right job.

T F 14. It is important to report unsafe conditions to your supervisor.

T F 15. If you see a fire, immediately try to put it out, then call the fire department for help.

T F 16. A fire extinguisher is a device used to start fires.

T F 17. It is okay to operate a new machine without first seeing a demonstration of its safe and proper use if you feel you can do it.

T F 18. If you're careful, it is not necessary to unplug a broken electrical appliance before you work on it.

Exhibit 4

True and False Answer Key

1. T
2. T
3. T
4. T
5. T
6. F
7. T
8. T
9. F
10. T
11. F
12. T
13. T
14. T
15. F
16. F
17. F
18. F

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